United States Department of Agriculture

Final Environmental Impact Statement

for the Malheur, Umatilla, and Wallowa-Whitman National Forests Land Management Plans

Volume 4: Appendix

Forest Service

Pacific Northwest Region

2018

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Appendix A: Forest Plan Revision Alternatives in Detail

The alternatives were developed based on public involvement during and prior to the scoping period for the proposed action, after the release of the Draft Environmental Impact Statement, and based on the purpose and need and issues. The alternatives present a range of analysis options, as required by National Environmental Policy Act (NEPA) regulations (40 CFR 1502.14).

The plan revision alternatives (all alternatives except the no-action alternative) provide a framework for analyzing different ways of meeting the purpose and need to revise the forest plans by responding to one or more of the issues identified during the scoping period (Chapter 1). Each plan revision alternative displays a range of options for guiding land and resource management activities on the Blue Mountains national forests during the life of the revised plans. According to the National Forest Management Act of 1976, forest plans shall be revised at least every 15 years (P.L. 94-588).

Eight alternatives are analyzed in detail in the Final Environmental Impact Statement. Alternative A (retaining the 1990 Forest Plans) is described below in "Part 1—No-action Alternative Description." "Part 2-Description of the Plan Revision Alternatives" describes Alternatives B through F, focusing on what differs between them.

The proposed revised plan includes "plan components" and "other content." Forest plan components consist of goals and desired conditions, standards, guidelines, objectives, special areas, management areas, suitable uses and activities, and monitoring and evaluation. The goals create the framework for the plan. Under each goal, there is a set of desired conditions, standards, guidelines and objectives. The goals and desired conditions are a set of interrelated ecological, social, and economic conditions. The Forest Service would manage the land and resources within the plan area to achieve or maintain the goals and desired conditions, allowing the national forests to contribute to a range of outcomes now and in the future. This emphasis on integration of the goals and desired conditions promotes an adaptive and active management philosophy, including working with partners, to accomplish this vision for the national forests of the Blue Mountains.

Once approved, any substantive changes to plan components would require amending the forest plan. Certain changes to plan components may be made using an administrative correction process. Nonsubstantive errors, such as misspellings or typographical mistakes may be corrected via an errata and information; for example, data and maps may be updated without pursuing a forest plan amendment. The public would be notified of all plan amendments and administrative corrections before they become effective.

This appendix does not repeat the background and existing condition information provided in the Forest Plans. Components are further described in the plans, as appended to the draft Record(s) of Decision.

Part 1: No-action Alternative Description (1990 Plans)

How the Alternative was Developed

NEPA requires an analysis of the no-action alternative (40 CFR 1502.14(d)). Alternative A is the No-action Alternative. No action means that there would be no change in current management (FSH 1909.15(14.2)). This alternative would keep in effect the original 1990s era forest plans as amended and as modified by regulation. Management allocations, activities, and management direction described in the existing forest plans (as amended and as modified by regulation) would continue for the next 15 years. The no-action alternative also provides a baseline for comparison of the plan revision alternatives.

The original Forest Plans initially placed an emphasis on the production of wood products using even-aged regeneration harvest. The assumptions made in the Forest Plans were that ecological conditions were healthy and would remain so and that disturbances (such as fire, insects, and disease) would not substantially affect planned actions, desired outcomes, or outputs. Significant changes in forest plan direction occurred in 1995 when the following three amendments were incorporated into the Forest Plans.

PACFISH

The decision supporting the environmental assessment for the "Implementation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California" (USDA and USDI 1995a), commonly referred to as PACFISH, amended the Forest Plans to include management direction to slow the degradation of and begin the restoration of aquatic and riparian ecosystems for anadromous fish.

Inland Native Fish Strategy

The decision supporting the Environmental Assessment for the "Inland Native Fish Strategy, Interim Strategies for Managing Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, Western Montana and Portions of Nevada" (USDA and USDI 1995b, commonly referred to as INFISH), amended the Forest Plans to include management direction, as a companion to the protection provided for anadromous fish by PACFISH, providing interim direction to protect habitat and populations of resident native fish outside of anadromous fish habitat.

These two amendments require the establishment of riparian habitat conservation areas (RHCAs) and riparian management objectives (RMOs), and focus on restoration of aquatic and riparian areas as habitat for native fish species. They provide substantial protection to fish species listed as threatened or endangered under the Endangered Species Act and their habitats by maintaining quality habitat where it exists and reducing risks to habitat and species over the short term.

Eastside Screens

In 1994, the Forest Service Pacific Northwest Region regional forester issued "Interim Direction Establishing Riparian, Ecosystem, and Wildlife Standards for Timber Sales on Eastside Forests" (USDA Forest Service 1995c), commonly referred to as the Eastside Screens. It amended the 1990 Forest Plans by establishing riparian, ecosystem, and wildlife standards for timber sales.

The Eastside Screens amendment emphasizes retaining and developing late old forest structures and patch sizes within the historic range of variability; maintaining or developing linkages between old forests; meeting requirements for snags, downed logs, and green tree replacements; and retaining most trees greater than 21 inches in diameter.

Although these three amendments resulted in substantial changes to the direction in existing plans, objectives for timber harvest and allowable sale quantity (ASQ) were not adjusted. This summary of the no-action alternative updates the ASQ and some objectives for all Forest Plans using the amended direction.

Lands administered implementing the 1990 Forest Plans are intended to provide a mix of natural resource-based goods and services. Management direction focuses on providing sustained levels of resource output, including timber and wood products, livestock forage, big game, and minerals in an environmentally sound manner, while also providing other uses and values such as scenery, recreation opportunities, viewable wildlife, and clean air and water. Portions of the landscape are used for commodity production, while some portions are allocated to wilderness areas, scenic areas, and research natural areas, among others.

Management Area Acres

Management areas are not consistently described or identified in the three Forest Plans. While not all national forests have the same types of special areas, in general they have similar management expectations across large areas.

For purposes of comparing acres, the current management areas have been put into the same categories as Alternatives B through F. The crosswalk showing how the current management areas were assigned to this scheme is in the analysis file and is available upon request. The tables showing the acres by management area for Alternatives B through F are in Part 2—Comparison of the Plan Revision Alternatives.

Table A-1 does not include the Hells Canyon National Recreation Area (HCNRA). The HCNRA Comprehensive Management Plan is part of the Wallowa-Whitman National Forest Land and Resource Management Plan and guides management of the HCNRA. This plan carries forward in its entirety the HCNRA Comprehensive Management Plan, which was updated in 2003. Table A-1 includes acre values of the portion of the Ochoco National Forest administered by the Malheur National Forest.

The management area acres displayed in Table A-1 are from the 1990 forest plans and have not been recalculated using the most current GIS technology. Adding the acreages in Table A-1 will not produce a sum equal to the total acreage for each national forest because of overlapping management areas. The overlapping management areas result in the total acreage of all management areas being greater than the official national forest acreages. For example, several research natural areas (MA 2B) and wild and scenic rivers (MA 2A) overlap into congressionally designated wilderness areas (MA 1A).

Table A-1. Management area designation, name, and acreage by national forest for Alternative A (note: 2F and 2G units are miles) based on 1990 forest plan

Management Area Designation and Name	Malheur	Umatilla	Wallowa-Whitman**
1A – Congressionally Designated Wilderness Areas	82,557	304,173	373,676*
1B – Preliminary Administratively Recommended Wilderness Areas	0	0	0
1C – Wilderness Study Area	0	0	2,350
2A – Wild and Scenic River (Includes Designated, Eligible, and Suitable Rivers	10,807	6,926	21,936
2B – Research Natural Areas	3,426	8,396	2,635
2C – Botanical Areas	30	817	0
2D – Geological Areas	40	416	0
2E – Historical Areas	0	1,178	0
2F – Scenic Byways and All-American Roads (miles)	0	0	0
2G – Nationally Designated Trails (miles)	0	0	0
2H – Scenic Areas	14,399	31,109	0
2I – Starkey Experimental Forest and Range	0	0	27,251
2J – Municipal Watersheds	519	12,581	0
3A – Backcountry (nonmotorized use)	47,535	29,760	0
3B – Backcountry (motorized use)	14,652	11,909	119,938
3C – Wildlife Corridor	0	0	0
4A – General Forest/Timber/Range	851,877	296,180	734,500
4A – General Forest/Timber/Range (excludes 4B RHCA)	798,021	255,898	612,820
4B – Riparian Management Areas (no RHCAs)	34,893	25,076	0
4B – RHCA (within 4A)	53,700	44,700	121,683
4B – RHCA (All)	168,545	237,514	360,123
4C – Old Forest	84,232	44,277	60,285
4D – Big Game Winter/Summer Range	293,453	130,215	396,703
4E – General Wildlife/Fish	50,741	430,166	60,326
4F – Visuals	217,328	65,775	4,287
5 – Developed Sites and Administrative Areas	647	4,922	7,111

*Wallowa-Whitman National Forest private inclusions are included in the acre totals for congressionally designated wilderness areas.

**In addition, this table does not include acreage for the Hells Canyon National Recreation Area (HCNRA). This plan carries forward in its entirety the HCNRA Comprehensive Management Plan (CMP), which was updated in 2003. The HCNRA CMP is the portion of the Wallowa-Whitman National Forest Land and Resource Management Plan that guides management of the HCNRA.

RHCA = riparian habitat conservation area

1990 Forest Plans
Management Direction for Specific Resources

The 1990 forest plans for the Malheur, Ochoco, Umatilla, and Wallowa-Whitman National Forests are currently available in their entirety on the Blue Mountains Forest Plan Revision portion of the Wallowa-Whitman National Forest website.[1] The portions of the Forest Plans described here are highlights of Plan direction for riparian and aquatic resources, old forest, invasive species, wildlife habitat (and more specifically elk habitat), timber, and rangeland management.

Management Direction for Riparian and Aquatic Resources

The current direction for the management of riparian and aquatic resources is found in the following strategies, which were amended to all three forest plans in 1995:

- Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH)
- Interim Strategies for Managing Inland Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (INFISH)

The following section displays PACFISH and INFISH direction.

Many of the PACFISH and INFISH standards and guidelines are procedural, requiring coordination with other agencies, conducting inventories or assessments, or requirements to modify or establish specific permits or operating plans. Standards and guidelines are generally limitations on activities or uses for reasons of environmental protection, public safety and risk reduction, or to achieve goals and desired conditions.

PACFISH and INFISH Management Direction (General)

Objective. Restore watersheds to reverse or arrest adverse impacts to water quality and fish habitat. Areas where fish habitat(s) or water quality has been adversely affected shall be given high priority for corrective treatments that mitigate impacts or rehabilitate these areas.

Objective. Provide and maintain a diverse, well-distributed pattern of fish habitat to increase anadromous and inland native fish runs. For example:

- Meet state water quality standards for stream temperature and streamside vegetation;
- Maintain sufficient large woody debris to provide for continuous long-term supply in all channels;
- Promote bank, floodplain, and channel stability to provide resilience to disturbance and foster aquatic diversity; and
- Provide pools that are large, well distributed and persistent during low flows, and conserve or restore channel morphology appropriate to the climate and landform.

Guideline. Practices that maintain or promote sufficient residual vegetation and appropriate channel morphology and functions can be used to maintain, improve, or restore riparian and wetland functions.

[1] http://www.fs.usda.gov/goto/BlueMtnsPlanRevision

Objective. Achieve riparian and wetland area improvement and maintenance through management of existing uses, wherever feasible.

Objective. Limit or mitigate surface disturbance in floodplains, riparian areas, and aquatic habitats to prevent soil movement, loss, and sedimentation.

PACFISH and INFISH Aquatic Habitat and Watershed Direction

Objective. Manage and provide aquatic habitat to contribute to the maintenance of stocks of anadromous and inland native fish and to ensure consistent, effective, and efficient Endangered Species Act consultation.

Objective. Provide protection for all watersheds containing designated critical habitat for listed anadromous fish (Key Watersheds).

Objective. Provide a pattern of protection across the landscape with an emphasis on federally listed fish. Include watersheds that have strong assemblages, degraded watersheds with a high restoration potential, and watersheds that provide for meta-population objectives (Priority Watersheds).

Objective. Improve current conditions of watersheds by restoring degraded habitat and providing long-term protection to riparian and aquatic resources.

PACFISH and INFISH Livestock Grazing in RHCAs[2]

Standard GM-1. Modify grazing practices (for example, accessibility of riparian areas to livestock, length of grazing season, stocking levels, timing of grazing) that retard or prevent attainment of RMOs (riparian management objectives) or are likely to adversely affect aquatic resources. Suspend grazing if adjusting practices is not effective in meeting RMOs.

Standard GM-2. New livestock handling and/or management facilities shall be located outside of RHCAs. For existing livestock handling facilities inside RHCAs, assure that facilities do not prevent attainment of RMOs. Relocate or close facilities where these objectives cannot be met.

Standard GM-3. Limit livestock trailing, bedding, watering, loading, salting, and other handling efforts to those areas and times that would not retard attainment of RMOs or adversely affect aquatic resources.

Standard GM-4. Adjust wild horse and burro management to avoid impacts that prevent attainment of RMOs or adversely affect aquatic resources.

PACFISH and INFISH Timber Management in RHCAs

Standard TM-1. Prohibit timber harvest, including fuelwood cutting, in Riparian Habitat Conservation Areas (RHCAs), except as described below. Do not include RHCAs in the land base used to determine the Allowable Sale Quantity; however, any volume harvested can contribute to the timber sale program.

a) Where catastrophic events such as fire, flooding, volcano, wind, or insects cause damage that results in degraded riparian conditions, allow salvage and fuel cutting in RHCAs only where present and future woody debris needs are met, where cutting would not retard or prevent attainment of other riparian management objectives (RMOs), and where adverse effects can

[2] RHCA = riparian habitat conservation area

be avoided to aquatic resources. Ecosystem Analysis at the Watershed Scale shall be completed prior to harvest, including salvage and fuel wood cutting, in RHCAs.

b) Apply silvicultural practices for RHCAs to acquire desired vegetation characteristics where needed to attain RMOs. Apply silvicultural practices in a manner that does not retard attainment of RMOs and that avoids adverse effects on aquatic resources.

PACFISH and INFISH Fire Management in RHCAs

Standard FM-1. Design fuel treatment and fire suppression strategies, practices, and actions so as to not prevent attainment of RMOs and to minimize disturbances of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions could perpetuate or be damaging to long-term ecosystem function or aquatic resources.

Standard FM-2. Locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of RHCAs. If the only suitable location for such activities is within the RHCAs, an exemption may be granted following a review and recommendation by a resource advisor. The advisor would prescribe the location, use conditions, and rehabilitation requirements, with avoidance of adverse effects to aquatic resources a primary goal. Use an interdisciplinary team, including a fishery biologist, to predetermine incident base and helibase locations during pre-suppression planning.

Standard FM-3. Prohibit delivery of chemical retardant, foam, or additives to surface waters. An exception may be warranted in situations where overriding immediate safety imperatives exist, or, following a review and recommendation by a resource advisor and a fishery biologist, when the action agency determines an escaped fire would cause more long-term damage to fish habitats than chemical delivery to surface waters.

Standard FM-4. Prescribed burn projects and prescriptions should be designed to contribute to the attainment of the RMOs.

Standard FM-5. Immediately establish an emergency team to develop a rehabilitation treatment plan to attain RMOs and avoid adverse effects on aquatic resources whenever RHCAs are significantly damaged by a wildfire or a prescribed fire is burning out of prescription.

PACFISH and INFISH Road Management in RHCAs

Standard RF-1. Cooperate with federal, tribal, state, and county agencies and cost-share partners to achieve consistency in road design, operation, and maintenance necessary to attain RMOs.

Standard RF-2. For each existing or planned road, meet the RMOs and avoid adverse effects on aquatic resources as described below:

a) Ecosystem Analysis at the Watershed Scale shall be completed prior to construction of new roads or landings in RHCAs.

b) Road and landing locations in RHCAs shall be minimized.

c) Initiate development and implementation of a Road Management Plan or a Transportation Management Plan.

   At a minimum, the plan shall address the following items:

   - Road design criteria, elements, and standards that govern construction and reconstruction.

- Road management objectives for each road.
- Criteria that govern road operation, maintenance, and management.
- Requirements for pre-, during-, and post-storm inspections and maintenance.
- Regulation of traffic during wet periods to minimize erosion and sediment delivery and accomplish other objectives.
- Implementation and effectiveness of monitoring plans for road stability, drainage, and erosion control.
- Mitigation plans for road failures.

d) Avoid sediment delivery to streams from the road surface. Outsloping of the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe. Route road drainage away from potentially unstable stream channels, fills, and hillslopes.

e) Avoid disruption of natural hydrologic flow paths.

f) Avoid side casting of soils or snow. Side casting of road material is prohibited on road segments within or abutting RHCAs.

Standard RF-3. Determine the influence of each road on RMOs. Meet RMOs and avoid adverse effects on aquatic resources by:

a) Reconstructing road and drainage features that do not meet design criteria or operation and maintenance standards that have been shown to be less effective than designed for controlling sediment delivery, that retard attainment of RMOs, or that do not protect watersheds from increased sedimentation.

b) Prioritizing reconstruction based on the current and potential damage to aquatic resources and their watersheds, the ecological value of the riparian resources affected, and the feasibility of options such as helicopter logging and road relocation out of RHCAs.

c) Closing and stabilizing or obliterating and stabilizing roads not needed for future management activities. Prioritize these actions based on the current and potential damage to aquatic resources in watersheds and the ecological value of the riparian resources affected.

Standard RF-4. Construct new and improve existing culverts, bridges, and other stream crossings to accommodate a 100-year flood, including associated bedload and debris, where those existing structures would or do pose a substantial risk to riparian conditions. Such improvements should include those structures that do not meet design and operation maintenance criteria that have been shown to be less effective than designed for controlling erosion, or that retard attainment of RMOs. Priority for upgrading shall be based on risks and the ecological value of the riparian resources affected. Construct and maintain crossings to prevent diversion of stream flow out of the channel and down the road in the event of crossing failures.

Standard RF-5. Provide and maintain fish passage at all crossings of existing and potential fish-bearing streams.

Standard RF-6. Develop and implement a road management plan or a transportation management plan that will meet the RMOs.

PACFISH and INFISH Minerals Management in RHCAs

Standard MM-1. Avoid adverse impacts to listed species and designated critical habitat from mineral operations. If the Notice of Intent indicates that a mineral operation would be located in

an RHCA and could affect attainment of RMOs or could adversely affect listed anadromous fish, then require a reclamation plan, approved Plan of Operations (or other such governing document), and reclamation bond. For effects that cannot be avoided, such plans and bonds must address the following items to attain RMOs and avoid adverse effects on listed anadromous fish: the costs of removing facilities, equipment, and materials; recontouring disturbed areas to approximate pre-mining topography; isolating and neutralizing or removing toxic or potentially toxic materials; salvage and replacement of topsoil; and seedbed preparation and re-vegetation. Ensure Reclamation Plan contain measurable attainment and bond release criteria for each reclamation activity.

Standard MM-2. Locate structures, support facilities, and roads outside RHCAs. Where no alternative to siting facilities in RHCAs exists, locate and construct the facilities in ways that avoid impacts to RHCAs and streams and that avoid adverse effects on aquatic resources. Where no alternative to road construction exists, keep roads to the minimum necessary for the approved mineral activity. Close, obliterate, and re-vegetate roads no longer required for mineral or land management activities.

Standard MM-3. Prohibit solid and sanitary waste facilities in RHCAs. If no alternative to locating mine waste (waste rock, spent ore, tailings) facilities in RHCAs exists, and if releases can be prevented and stability can be ensured, then:

a) Analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics.

b) Locate and design the waste facilities using the best conventional techniques to ensure mass stability and prevent the release of acid or toxic materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, prohibit such facilities in RHCAs.

c) Monitor waste and waste facilities to confirm predictions of chemical and physical stability, and make adjustments to operations as needed to avoid adverse effects to aquatic resources and to attain RMOs.

d) Reclaim and monitor waste facilities to assure chemical and physical stability and re-vegetation, to avoid adverse effects to aquatic resources, and to attain the RMOs.

e) Require reclamation bonds adequate to ensure long-term chemical and physical stability and successful re-vegetation of mine waste facilities.

Standard MM-4. For leasable minerals, prohibit surface occupancy within RHCAs for oil, gas, and geothermal exploration and development activities where contracts and leases do not already exist, unless there are no other options for location and RMOs can be attained and adverse effects to aquatic resources can be avoided. Adjust the operating plans of existing contracts to (1) eliminate impacts that prevent attainment of RMOs and (2) avoid adverse effects to native aquatic species.

Standard MM-5. Permit sand and gravel mining and extraction within RHCAs only if no alternatives exist, if the action(s) will not retard or prevent attainment of RMOs, and if adverse effects to native aquatic species can be avoided.

Standard MM-6. Develop inspection, monitoring, and reporting requirements for mineral activities. Evaluate and apply the results of inspection and monitoring to modify mineral plans, leases, or permits as needed to avoid adverse effects on native aquatic species and to eliminate impacts that prevent attainment of RMOs.

PACFISH and INFISH Hydro and Surface Water Projects in RHCAs (Lands)

Standard LH-1. For hydroelectric and other surface water development proposals, require instream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage, reproduction, and growth. Coordinate this process with the appropriate state agencies. During relicensing of hydroelectric projects, provide to the Federal Energy Regulatory Commission (FERC) written and timely license conditions that require fish passage and flows and habitat conditions that maintain/restore riparian resources and channel integrity. Coordinate relicensing projects with the appropriate state agencies.

Standard LH-2. Locate new hydroelectric ancillary facilities outside RHCAs. For existing ancillary facilities inside the RHCA that are essential to proper management, provide recommendations to FERC to assure that the facilities would not prevent attainment of the RMOs and that adverse effects on aquatic resources are avoided. Where these objectives cannot be met, proved recommendations to FERC that such ancillary facilities should be relocated. Locate, operate, and maintain hydroelectric facilities that must be located in RHCAs to avoid adverse effects on aquatic resources.

Standard LH-4. Use land acquisition, exchange, and conservation easements to meet RMOs and facilitate restoration of fish stocks and other species at risk of extinction.

PACFISH and INFISH Leases and Permits in RHCAs

Standard LH-3. Issue leases, permits, rights-of-way, and easements to avoid adverse effects on aquatic resources and to avoid effects that would be inconsistent with or prevent attainment of RMOs. Where the authority to do so was retained, adjust existing leases, permits, rights-of-way, and easements to eliminate effects that would retard or prevent attainment of the RMOs or adversely affect aquatic resources. If adjustments are not effective, eliminate the activity. Where the authority to adjust was not retained, negotiate to make changes in existing leases, permits, rights-of-way, and easements to eliminate effects that would prevent attainment of the RMOs or adversely affect aquatic resources. Priority for modifying easements would be based on the current and potential adverse effects on aquatic resources and the ecological value of the riparian resources affected.

PACFISH and INFISH Fuel, Pesticides, and Herbicides in RHCAs

Standard RA-3. Apply herbicides, pesticides, and other toxicants and chemicals in a manner that does not retard or prevent attainment of RMOs and that avoids adverse effects on aquatic resources.

Standard RA-4. Prohibit storage of fuels and other toxicants within RHCAs. Prohibit refueling within RHCAs unless there are no other alternatives. Refueling sites within RHCAs shall be approved by the Forest Service or Bureau of Land management and have an approved spill containment plan.

Standard RA-5. Locate water-drafting sites to avoid adverse effects on aquatic resources and instream flow and in a manner that does not retard or prevent attainment of RMOs.

PACFISH and INFISH Recreation in RHCAs

Standard RM-1. Design, construct, and operate recreation facilities (including trails) and dispersed sites in a manner that does not retard or prevent attainment of RMOs and avoids effects on aquatic resources.

Complete Ecosystem Analysis at the Watershed Scale prior to construction of new recreation facilities in RHCAs.

For existing recreation facilities inside RHCAs, assure that facilities or use of facilities will not prevent attainment of RMOs or adversely affect native aquatic species. Relocate or close recreation facilities where RMOs cannot be met or adverse effects on aquatic resources cannot be avoided.

Standard RM-2. Adjust dispersed and developed recreation practices that retard or prevent attainment of RMOs or adversely affect aquatic resources. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific sites closures are not effective in meeting RMOs and avoiding adverse effects on aquatic resources, eliminate the practice or occupancy.

PACFISH and INFISH Watershed and Habitat Restoration in RHCAs

Standard WR-1. Design and implement watershed restoration projects in a manner that promotes the long-term ecological integrity of ecosystems, conserves the genetic integrity of native species, and contributes to attainment of RMOs.

Standard WR-2. Cooperate with Federal, State, local, and Tribal agencies, and private landowners to develop watershed-based Coordinated Resource Management Plans (CRMPs) or other cooperative agreements to meet RMOs.

Standard WR-3. Do not use planned restoration as a substitute for preventing habitat degradation (i.e., use planned restoration only to mitigate existing problems, not to mitigate the effects of proposed activities).

Standard FW-1. Design and implement fish and wildlife habitat restoration and enhancement actions in a manner that contributes to attainment of the RMOs.

Standard FW-2. Design, construct, and operate fish and wildlife interpretive and other user-enhancement facilities in a manner that does not retard or prevent attainment of RMOs or adversely affect aquatic resources. For existing fish and wildlife interpretive and other user-enhanced facilities inside RHCAs, assure that RMOs are met and adverse effects on aquatic resources are avoided. Where RMOs cannot be met or adverse effects on aquatic resources avoided, relocate or close such facilities.

Standard FW-3. Cooperate with Federal, tribal, and State wildlife management agencies to identify and eliminate wild ungulate impacts that prevent attainment of the RMOs or adversely affect listed anadromous and inland native fish.

Standard FW-4. Cooperate with Federal, tribal, and State wildlife management agencies to identify and eliminate wild adverse effects on native anadromous and inland fish associated with habitat manipulation, fish stocking, fish harvest, and poaching.

Standard RA-1. Identify and cooperate with Federal, tribal, State, and local governments to secure instream flows needed to maintain riparian resources, channel conditions, and aquatic habitat.

Standard RA-2. Trees may be felled in RHCAs when they pose a safety risk. Keep felled trees on site when needed to meet woody debris objectives.

PACFISH and INFISH Riparian Habitat Conservation Area Widths Descriptions

Riparian Area Minimum Widths

Fish-bearing Streams

Interim RHCAs consist of the stream and the area on each side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet total, including both sides of the stream channel), whichever is greatest.

Permanently Flowing Non-fish-bearing Streams

Interim RHCAs consist of the stream and the area on each side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet total, including both sides of the stream channel), whichever is greatest.

Constructed Ponds, Reservoirs, and Wetlands Greater than 1 Acre

Interim RHCAs consist of the body of water or wetland and: the area to the outer edges of the riparian vegetation, or to the extent of seasonally saturated soil, or the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs, or from the edge of the wetland, pond or lake, whichever is greatest.

Lakes and Natural Ponds

Same as constructed ponds, reservoirs, and wetlands greater than 1 acre.

RHCAs: Seasonally flowing or intermittent streams, wetlands smaller than 1 acre, landslides, and landslide-prone areas.

RMAs: Seasonally flowing, intermittent and ephemeral streams, wetlands smaller than 1 acre, and unstable areas

This category applies to features with high variability in size and site-specific characteristics. At a minimum, the RHCAs should include:

a) The extent of landslides and landslide-prone areas

b) The intermittent stream channel and the area to the top of the inner gorge.

c) The intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation.

d) For priority watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.

e) For watersheds not identified as Priority Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one-half site-potential tree, or 50 feet slope distance, whichever is greatest.

Non-forested Rangeland Ecosystems

The Interim riparian habitat conservation area (RHCA) width for permanently flowing streams in categories 1 and 2 is the extent of the 100-year flood plain.

Table A-2. PACFISH and INFISH interim riparian management objectives

Habitat Feature		Riparian Management Objectives								
Water Temperature		No measurable increase in maximum water temperature (7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature of the warmest consecutive 7-day period). Maximum water temperatures below 59F within adult holding habitat and below 48F within spawning and rearing habitats.								
Large woody debris (forested systems)		East of Cascade Crest in Oregon, Washington, Idaho: > 20 pieces per mile; > 12 inch diameter; > 35 foot length								
Bank Stability (nonforested systems)		> 80% stable								
Lower Bank Angle (nonforested systems)		> 75% of banks with < 90 degree angle								
Width/Depth Ratio (all systems)		< 10, mean wetted depth divided by mean depth								
Pool Frequency	Wetted width (feet)	10	20	25	50	75	100	125	150	200
	Pools per mile	96	56	47	26	23	18	14	12	9

Management Direction for Old Forest

All three forest plans designate management areas for old growth. None of the 1990 forest plans allows scheduled timber harvest in designated old growth management areas.

For areas outside of designated old growth management areas, the following direction applies.

Current direction for timber sales includes “Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales” (Eastside Screens), which was amended into the three forest plans in 1995 (USDA and USDI 1995b). The Eastside Screens requirements are shown on the following page.

The following activities are not subject to Eastside Screens direction:

- Personal use firewood sales
- Post and pole sales
- Sales to protect health and safety
- Sales to modify vegetation within recreation special use areas

The following sales are not subject to the historic range of variability analysis, but must apply wildlife standards:

- Pre-commercial thinning sales
- Sales of material sold as fiber
- Sales of dead material less than 7 inches diameter, with incidental green volume
- Salvage sales, with incidental green volume, located outside currently mapped old-growth
- Commercial thinning and understory removal sales located outside currently mapped old-growth

All other sales are subject to the historic range of variability analysis. The historic range of variability is a way of characterizing the landscape for patterns of stand structure by biophysical environment and comparing them to pre-settlement conditions.

Eastside Screens Requirements

1. DETERMINE the historic range of variability:
    - ♦ describe the dominant historical disturbance regime
    - ♦ characterize the landscape pattern and abundance of structural stages maintained by the disturbance regime
    - ♦ describe spatial pattern and distribution of structural stages under the Historic Range of Variability disturbance regime
    - ♦ map the current pattern of structural stages AND calculate their abundance by biophysical environmental setting
2. CHARACTERIZE the proposed timber sale and its associated watershed for patterns of stand structure by biophysical environment within a watershed and compare to the historic range of variability.

Scenario A: WHERE either late/old structure (LOS), single story, or multi-story falls BELOW HRV, NO NET LOSS of LOS from that biophysical environment. DO NOT ALLOW timber sale harvest activities to occur within LOS stages that are BELOW HRV.

1. Some timber sale activities can occur WITHIN the LOS multi-story stages that are AT or ABOVE the historic range of variability in a manner to MAINTAIN or ENHANCE LOS within that biophysical environment. It is ALLOWABLE to manipulate one type of LOS to move stands into the LOS stage that is DEFICIT (LOS multi to LOS single), if this meets historical conditions.
2. OUTSIDE LOS, many types of timber sale activities are ALLOWED. The intent is still to maintain and/or enhance LOS components in stands subject to timber harvest as much as possible, by adhering to the following standards:
    a. MAINTAIN ALL remnant late and old seral (LOS) and/or structural live trees ≥ 21" d.b.h. that currently exist within stands proposed for harvest activities;
    b. MANIPULATE vegetative structure that does not meet LOS conditions, in a manner that moves it towards these conditions as appropriate to meet the Historic Range of Variability.
    c. MAINTAIN open, park-like stand conditions where this condition occurred historically. Manipulate vegetation in a manner to encourage the development and maintenance of large diameter, open canopy structure.
3. Maintain or enhance the current level of connectivity between LOS stands and between all Forest Plan designated old-growth habitats by maintaining stands between them.
    i. CONNECT these LOS and old-growth habitats with each other in a contiguous network pattern by at least two different directions;
    ii. Connectivity corridors should be as SHORT as possible
    iii. A connectivity corridor stand is one in which MEDIUM diameter or larger trees are COMMON, canopy covers are within the TOP 1/3 of SITE POTENTIAL, and stand WIDTH is at least 400 feet wide at the narrowest point;

iv. Harvesting within connectivity corridors IS PERMITTED IF, all criteria in the above element can be met (maintained during harvest).

v. Reduce fragmentation of LOS stands, or at least, DO NOT INCREASE it from current levels. Stands that do not currently meet LOS that are located within, or surrounded by, blocks of LOS stands SHOULD NOT be considered for even-aged regeneration harvest, or group selection at this time.

4. All sale activities WILL MAINTAIN snags and GTR trees of > 21" d.b.h., at 100% potential population levels of primary cavity excavators;

   Pre-activity down logs may be removed only when they exceed the quantities listed below:

Species	Pieces/acre	Diameter	Piece size and total feet
Ponderosa pine	3-6	12”	> 6' and 20-40 ft.
Mixed conifer	15-20	12"	> 6' and 100-140 ft.
Lodgepole pine	15-20	8"	> 8' and 120-160 ft.

   i. These down log criteria are NOT INTENDED TO PRECLUDE the use of prescribed fire. Consumption WILL NOT EXCEED 3 inches total of diameter reduction in the featured large logs.

   ii. Leave logs in current lengths, DO NOT CUT them into pieces. Longer logs may be counted for multiple "pieces" without cutting them.

   iii. For all stands, snags >20 inches d.b.h. are preferred and should be left whenever possible, with snags down to the 15 inch category being left when larger snags are not available.

   iv. Leave pre-activity (currently existing) levels of down logs, unless they exceed the quantities listed below. Harvest activities should supplement pre-activity levels of down logs up to the maximum level. Exceptions can be made where fire protection needs for life and property cannot be accomplished with this quantity of debris left on site.

5. Follow the following goshawk requirements. Protect known active and historically used goshawk nest sites. Harvest is prohibited in the 30 acres surrounding active and historical goshawk nest sites. Establish a 400-acre post fledging area around every active nest site.

Scenario B: If the single story LOS stage is within or exceeds the historic range of variability within a watershed, or if both LOS single and multi-story are within or exceed the historic range of variability, then harvest can occur within these stages as long as LOS conditions do not fall below the Historic Range of Variability. Enhance LOS structure and attributes as possible.

1. Harvest activities can occur in order of the following three priorities:

   (a) within stands OTHER THAN LOS

   (b) within smaller, isolated LOS stands less than 100 acres in size, and/or at the edges of large blocks of LOS stands (> 100 acres)

   (c) Within the interior of large LOS stands (> 100 acres)

2. MAINTAIN connectivity as directed in SCENARIO A.

3. Non-fragmentation Standards - within the interior of large LOS stands > 100 acres, harvest activities ARE LIMITED TO non-fragmenting prescriptions (i.e., thinning, single-tree selection, salvage, understory removal, and other non-regeneration activities). GROUP

SELECTION IS ONLY ALLOWED when openings created either mimic the natural forest pattern, and/or DO NOT EXCEED one-half acre in size.

4. ADHERE to the specific wildlife prescriptions for SNAGS, GREEN TREE REPLACEMENTS, and DOWN LOGS, as described in SCENARIO A.
5. Follow SCENARIO A, with the following EXCEPTION for goshawk post fledging areas outlined above in 5):
    - A 400-acre "post fledging area" will be established around every active nest site. While harvesting activities can occur within this area, up to 60% of the area should be retained in LOS conditions, (i.e., if 35% of the area is now in LOS stands, then it all needs to be retained; if 75% of the area is now in LOS stands, then some can be harvested, as long as this late and old stand structure does not drop below 60% of the area).

Management Direction for Invasive Species

In 2005, the regional forester amended the 1990 Forest Plans with the direction displayed below. Many standards and guidelines in the 1990 Forest Plans were superseded by this new amendment. The numbering is not sequential because the 2005 Invasive Plants Final Environmental Impact Statement selected alternative adopted no standard for standards 5, 9, 10, and 17.

2005 Preventing and Managing Invasive Plants Record of Decision Element

Standards and Guidelines

Standard 1. Prevention of invasive plant introduction, establishment and spread will be addressed in watershed analysis; roads analysis; fire and fuels management plans, Burned Area Emergency Recovery Plans; emergency wildland fire situation analysis; wildland fire implementation plans; grazing allotment management plans, recreation management plans, vegetation management plans, and other land management assessments.

Standard 2. Actions conducted or authorized by written permit by the Forest Service that will operate outside the limits of the road prism (including public works and service contracts), require the cleaning of all heavy equipment (bulldozers, skidders, graders, backhoes, dump trucks, etc.) prior to entering National Forest System Lands.

This standard does not apply to initial attack of wildland fires, and other emergency situations where cleaning would delay response time.

Standard 3. Use weed-free straw and mulch for all projects, conducted or authorized by the Forest Service, on National Forest System Lands. If State certified straw and/or mulch is not available, individual Forests should require sources certified to be weed free using the North American Weed Free Forage Program standards (see Appendix O of the Pacific Northwest Region's 2005 Invasive Plants Final Environmental Impact Statement) or a similar certification process.

Standard 4. Use only pelletized or certified weed free feed on all National Forest System lands. If state certified weed free feed is not available, individual Forests should require feed certified to be weed free using North American Weed Free Forage Program standards or a similar certification process. This standard may need to be phased in as a certification processes are established.

Standard 6. Use available administrative mechanisms to incorporate invasive plant prevention practices into rangeland management. Examples of administrative mechanisms include, but are

not limited to, revising permits and grazing allotment management plans, providing annual operating instructions, and adaptive management. Plan and implement practices in cooperation with the grazing permit holder.

Standard 7. Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that is judged to be weed free by District or Forest weed specialists.

Standard 8. Conduct road blading, brushing and ditch cleaning in areas with high concentrations of invasive plants in consultation with District or Forest-level invasive plant specialists, incorporate invasive plant prevention practices as appropriate.

Standard 11. Prioritize infestations of invasive plants for treatment at the landscape, watershed or larger multiple forest/multiple owner scale.

Standard 12. Develop a long-term site strategy for restoring/re-vegetating invasive plant sites prior to treatment.

Standard 13. Native plant materials are the first choice in re-vegetation for restoration and rehabilitation where timely natural regeneration of the native plant community is not likely to occur. Non-native, noninvasive plant species may be used in any of the following situations: 1) when needed in emergency conditions to protect basic resource values (e.g., soil stability, water quality and to help prevent the establishment of invasive species), 2) as an interim, non-persistent measure designed to aid in the reestablishment of native plants, 3) if native plant materials are not available, or 4) in permanently altered plant communities. Under no circumstances will nonnative invasive plant species be used for re-vegetation.

Standard 14. Use only APHIS and State-approved biological control agents. Agents demonstrated to have direct negative impacts on non-target organisms would not be released.

Standard 15. Application of any herbicides to treat invasive plants will be performed or directly supervised by a State or Federally licensed applicator. All treatment projects that involve the use of herbicides will develop and implement herbicide transportation and handling safety plan.

Standard 16. Select from herbicide formulations containing one or more of the following 10 active ingredients: chlorsulfuron, clopyralid, glyphosate, imazapic, imazapyr, metsulfuron methyl, picloram, sethoxydim, sulfometuron methyl, and triclopyr.

Mixtures of herbicide formulations containing 3 or less of these active ingredients may be applied where the sum of all individual Hazard Quotients for the relevant application scenarios is less than 1.0.

All herbicide application methods are allowed including wicking, wiping, injection, spot, broadcast and aerial, as permitted by the product label. Chlorsulfuron, metsulfuron methyl, and sulfometuron methyl will not be applied aerially. The use of triclopyr is limited to selective application techniques only (e.g., spot spraying, wiping, basal bark, cut stump, injection).

Additional herbicides and herbicide mixtures may be added in the future at either the Forest Plan or project level through appropriate risk analysis and NEPA/ESA procedures. This standard will be applied to invasive plant projects with NEPA decisions signed after March 1, 2006.

Standard 18. Use only adjuvants (e.g. surfactants, dyes) and inert ingredients reviewed in Forest Service hazard and risk assessment documents such as SERA, 1997a, 1997b; Bakke, 2003.

Standard 19. To minimize or eliminate direct or indirect negative effects to non-target plants, terrestrial animals, water quality and aquatic biota (including amphibians) from the application of herbicide, use site-specific soil characteristics, proximity to surface water and local water table depth to determine herbicide formulation, size of buffers needed, if any, and application method and timing. Consider herbicides registered for aquatic use where herbicide is likely to be delivered to surface waters.

Standard 20. Design invasive plant treatments to minimize or eliminate adverse effects to species and critical habitats proposed and/or listed under the Endangered Species Act. This may involve surveying for listed or proposed plants prior to implementing actions within unsurveyed habitat if the action has a reasonable potential to adversely affect the plant species. Use site-specific project design (e.g. application rate and method, timing, wind speed and direction, nozzle type and size, buffers, etc.) to mitigate the potential for adverse disturbance and/or contaminant exposure.

Standard 21. Provide a minimum buffer of 300 feet for aerial application of herbicides near developed campgrounds, recreation residences and private land (unless otherwise authorized by adjacent private landowners).

Standard 22. Prohibit aerial application of herbicides within legally designated municipal watersheds.

Standard 23. Prior to implementation of herbicide treatment projects, National Forest system staff will ensure timely public notification. Treatment areas will be posted to inform the public and forest workers of herbicide application dates and herbicides used. If requested, individuals may be notified in advance of spray dates.

Desired Conditions

In National Forest lands across Region Six, healthy native plant communities remain diverse and resilient, and damaged ecosystems are being restored. High quality habitat is provided for native organisms throughout the region. Invasive plants do not jeopardize the ability of the National Forests to provide goods and services communities expect. The need for invasive plant treatment is reduced due to the effectiveness and habitual nature of preventative actions, and the success of restoration efforts.

Goals and Objectives

Goal 1 Protect ecosystems from the impacts of invasive plants through an integrated approach that emphasizes prevention, early detection, and early treatment. All employees and users of the National Forest recognize that they play an important role in preventing and detecting invasive plants.

Objective 1.1 Implement appropriate invasive plant prevention practices to help reduce the introduction, establishment and spread of invasive plants associated with management actions and land use activities.

Objective 1.2 Educate the workforce and the public to help identify, report, and prevent invasive plants

Objective 1.3 Detect new infestations of invasive plants promptly by creating and maintaining complete, up-to-date inventories of infested areas, and proactively identifying and inspecting susceptible areas not infested with invasive plants.

Objective 1.4 Use an integrated approach to treating areas infested with invasive plants. Utilize a combination of available tools including manual, cultural, mechanical, herbicides, biological control.

Objective 1.5 Control new invasive plant infestations promptly, suppress or contain expansion of infestations where control is not practical, conduct follow up inspection of treated sites to prevent reestablishment.

Goal 2 Minimize the creation of conditions that favor invasive plant introduction, establishment and spread during land management actions and land use activities. Continually review and adjust land management practices to help reduce the creation of conditions that favor invasive plant communities.

Objective 2.1 Reduce soil disturbance while achieving project objectives through timber harvest, fuel treatments, and other activities that potentially produce large amounts of bare ground

Objective 2.2 Retain native vegetation consistent with site capability and integrated resource management objectives to suppress invasive plants and prevent their establishment and growth.

Objective 2.3 Reduce the introduction, establishment and spread of invasive plants during fire suppression and fire rehabilitation activities by minimizing the conditions that promote invasive plant germination and establishment.

Objective 2.4 Incorporate invasive plant prevention as an important consideration in all recreational land use and access decisions. Use Forest-level Access and Travel Management planning to manage both on-highway and off-highway travel and travel routes to reduce the introduction, establishment and spread of invasive plants.

Objective 2.5 Place greater emphasis on managing previously "unmanaged recreation" (OHVs, dispersed recreation, etc.) to help reduce creation of soil conditions that favor invasive plants, and reduce transport of invasive plant seeds and propagules.

Goal 3 Protect the health of people who work, visit, or live in or near National Forests, while effectively treating invasive plants. Identify, avoid, or mitigate potential human health effects from invasive plants and treatments.

Objective 3.1 Avoid or minimize public exposure to herbicides, fertilizer, and smoke.

Objective 3.2 Reduce reliance on herbicide use over time in Region Six

Goal 4 Implement invasive plant treatment strategies that protect sensitive ecosystem components, and maintain biological diversity and function within ecosystems. Reduce loss or degradation of native habitat from invasive plants while minimizing adverse effects from treatment projects.

Objective 4.1 Maintain water quality while implementing invasive plant treatments.

Objective 4.2 Protect non-target plants and animals from negative effects of both invasive plants and applied herbicides. Where herbicide treatment of invasive plants is necessary within the riparian zone, select treatment methods and chemicals so that herbicide application is consistent with riparian management direction contained in PACFISH, INFISH, and the Aquatic Conservation Strategies of the Northwest Forest Plan.

Objective 4.3 Protect threatened, endangered, and sensitive species habitat threatened by invasive plants. Design treatment projects to protect threatened, endangered, and sensitive species and maintain species viability.

Goal 5 Expand collaborative efforts between the Forest Service, our partners, and the public to share learning experiences regarding the prevention and control of invasive plants, and the protection and restoration of native plant communities.

Objective 5.1 Use an adaptive management approach to invasive plant management that emphasizes monitoring, learning, and adjusting management techniques. Evaluate treatment effectiveness and adjust future treatment actions based on the results of these evaluations.

Objective 5.2 Collaborate with tribal, other federal, state, local and private land managers to increase availability and use of appropriate native plants for all land ownerships.

Objective 5.3 Work effectively with neighbors in all aspects of invasive plant management: share information and resources, support cooperative weed management, and work together to reduce the inappropriate use of invasive plants (landscaping, erosion control, etc.).

Management Direction for Wildlife

Open Road Density

Open road density and corresponding human disturbance play a key role in determining whether wildlife remains in an area. Human disturbance associated with open roads can displace individual animals and make them vulnerable to harassment, reduce the amount of suitable habitat, and disturb nests and roosting activities.

Table A-3. Open road density by management area, 1990 forest plans

National Forest	Road Density	Management Area(s)*	Plan Component
Malheur	1.5 miles/square mile	MA 4D Wildlife Emphasis	Standard
	2.2 miles/square mile	MA 4D Winter Range	
	3.2 miles/square mile	Summer Range**	
Umatilla	2 miles/square mile	Forestwide	Desired condition
Wallowa-Whitman	1.5 miles/square mile	MA 4E Winter Range MA 4D General Wildlife/Fish	Standard
	2.5 miles/square mile	MA 4A General Forest	

* See crosswalk in project record for more information.

** Includes all areas outside wildlife emphasis, winter range, and designated wilderness areas.

Management Indicator Species

In the 1990 Plans, management indicator species (MIS) were selected because their population changes were believed to indicate the effects of management activities. The MIS identified for the 1990 forest plans are displayed in Table A-4.

Table A-4. 1990 Forest Plans management indicator species identified by national forest and criteria for selection

Management Indicator Species	MAL	UMA	WAW	OCH	Criteria for Selection
Rocky Mountain elk	X	X	X		Commonly hunted; general habitat needs; cover/forage/roads
American marten	X	X	X		Old growth; dead and down tree habitat; mature habitat with large trees
Pileated woodpecker	X	X	X	X	Old growth; mature and old growth stands at high elevations
Northern goshawk			X		Mature to old conifer stands
Northern three-toed woodpecker	X	X			Old growth; dead and down in mature and old lodgepole pine
Lewis' woodpecker	X				Dead and defective habitat
Yellow-bellied sapsucker	X				Dead and defective habitat
Red-breasted sapsucker	X				Dead and defective habitat
Williamson's sapsucker	X				Dead and defective habitat
Downy woodpecker	X				Dead and defective habitat
Hairy woodpecker	X				Dead and defective habitat
White-headed woodpecker	X				Dead and defective habitat
Black-backed woodpecker	X				Dead and defective habitat
Northern flicker	X				Dead and defective habitat; Old growth juniper habitat
Primary cavity excavators[1]		X	X	X	Snag habitat; dead and down tree habitats; standing dead trees
Resident trout[2]			X	X	High quality water and fishery habitat
Rainbow trout (resident)		X			Streams/riparian habitats
Rainbow/redband trout	X				Non-anadromous riparian
Steelhead trout	X	X	X		Anadromous riparian; streams/riparian habitats; high quality water and fishery habitat
Bull trout	X				Non-anadromous riparian
Cutthroat trout	X				Non-anadromous riparian

1. Primary cavity excavator definition or list:
   - Ochoco National Forest: wildlife species that excavate cavities in snags
   - Umatilla National Forest: wildlife species that excavate cavities in snags
   - Wallowa-Whitman National Forest: common flicker, Lewis' woodpecker, yellow-bellied sapsucker, Williamson's sapsucker, hairy woodpecker, downy woodpecker, white-headed woodpecker, black-backed woodpecker three-toed woodpecker, northern three-toed woodpecker, mountain chickadee, white-breasted nuthatch, red-breasted nuthatch and pygmy nuthatch
   - Malheur National Forest: did not use a primary cavity excavators group
2. Resident trout definition:
   - Wallowa-Whitman National Forest: did not define resident trout
   - Other national forests: did not use a resident trout group

Habitat Effectiveness Index for Rocky Mountain elk

The Habitat Effectiveness Index (HEI) model is used to predict the influence of forest management on elk. It predicts how effectively an area supports elk. It is intended to be only a relative measure of habitat effectiveness and does not consider many factors that influence the actual number of elk found in an area. Those factors include hunting, predation, disease, changes in weather and forage production, and competition with other species for forage. Model parameters include open road density, cover-to-forage ratio, and cover quality. Further discussion of the model can be found in the 1990 forest plans.

Table A-5. Comparison of Habitat Effectiveness Index*/cover standards for management areas (the management area identifiers are those used in the 1990 forest plans)

Umatilla National Forest	Malheur National Forest	Wallowa-Whitman National Forest**
A10, C4,F4 – Elk habitat will be managed to achieve an HEI of no less than 60 A10, C4 – 30% of area is cover with minimum of 15% (20% desired) of satisfactory cover. F4 – 30% of summer and winter area as cover with minimum of 10% (15-20% desired) of satisfactory cover C7, E2 – Elk habitat will be managed to achieve an HEI of no less than 45; 30% of area is cover with minimum of 10% (15-20% desired) of satisfactory cover. E1 – Elk habitat will be managed to achieve an HEI of at least 30; cover not mentioned C8 – (grass-tree mosaic) minimum HEI of 70% and 30% of summer and winter area as cover with minimum of 10% (15-20% desired) of satisfactory cover C3 – (winter range) minimum HEI of 70% with 30% of area as cover with minimum of 10% (15-20% desired) of satisfactory cover C3a – (sensitive winter range) minimum HEI of 70% with 30% of area as cover with minimum of 10% (15-20% desired) of satisfactory cover	1-Manage elk summer range to provide 20% cover and an HEI of 0.4. The mix of sat/mar cover can vary by summer range. 4A-Manage winter range to provide 25% cover and an HEI of 0.5. 20A, 20B, 21- Manage wildlife emphasis areas to provide and HEI of 0.7 and 40% cover Ochoco National Forest-No HEI standards and guidelines for management areas	1 – General forest will be managed to obtain an 0.5 HEI 3, 3a, 18 – Manage winter range and selected summer ranges to achieve an HEI of 74% Attempt to achieve an HEI of 0.5 in timber sale planning. *** 1 – Retain at least 30% of the forested area within a project in satisfactory or marginal cover.***

* HEI including discounts for roads open to motor vehicle traffic, as described in Wildlife Habitats in Managed Forests (Thomas et al. 1979). Marginal cover, satisfactory cover, and forage areas will be managed to meet size and spacing criteria as described in Habitat Effectiveness for Elk on Blue Mountains Winter Ranges (Thomas et al. 1988).

** The Wallowa-Whitman National Forest does not have forestwide elk standards. Those listed are from MA 3 Timber/Wildlife Emphasis.

*** From the record of decision.

Management Direction for Timber Harvest

Direction pertaining to timber sales is included in the Eastside Screens as well as in other portions of the 1990 forest plans. Tables A-6 and A-7 are specific to the lands suitable for timber production and the allowable sale quantity.

Table A-6. Lands suitable for timber production (acres) as shown in the 1990 forest plans and adjustments based on 2011 suitable acres, per alternative A (no action)

Year	MAL*	UMA	WAW**	Total
1990	985,000	619,000	837,000	2,441,000
2011 update***	780,000	380,000	590,000	1,750,000

* Includes Ochoco National Forest acres administered by the Malheur National Forest.

** The HCNRA was removed from Wallowa-Whitman National Forest lands suitable for timber production by regulation in 1994.

*** 2011 figures are based on recalculated timber suitability acres accounting for amendments and updated vegetation/soil mapping.

Table A-7. Allowable sale quantity (MMBF) as shown in the 1990 forest plans and 2011 actual outputs, per alternative A (no action)

Year	MAL*	UMA	WAW	Total
1990	234	124	141	499
2011	55	51	46	152

* Includes 34 MMBF from the portion of the Ochoco National Forest administered by the Emigrant Creek Ranger District of the Malheur National Forest.

Management Direction for Livestock Grazing and Grazing Land Vegetation

Table A-8 displays the current upland grazing standards contained in each plan. See Table A-9 for livestock grazing direction in RHCAs. The maximum utilization figures apply regardless of what is consuming the forage. One level of utilization applies when rangeland is satisfactory condition and another when rangeland is in unsatisfactory condition (see glossary for definitions). Different utilization levels are also allowed depending on the level of management within an allotment. Management level is defined as:

Level B Stewardship (minimum level): Livestock use managed within current grazing capacity. Cost-effective improvements used only to maintain stewardship of range.

Level C Extensive: Livestock managed to achieve full utilization of allocated forage.

Level D Intensive: Livestock managed to optimize forage production and utilization. May involve fencing and water development to implement complex grazing systems.

Sat: Satisfactory range condition–Forage condition is at least fair, with stable trend, and allotment is not classified PC (basic resource damage) or PD (other resource damage).

Unsat: Unsatisfactory range condition.

Table A-8. Management direction for the maximum percent utilization of livestock grazing in uplands

National Forest	Management Level	Forested		Grasslands		Shrubland	
		Sat	Unsat	Sat	Unsat	Sat	Unsat
MAL*	Stewardship B	40%	0-30%	50%	0-30%	40%	0-25%
	Extensive C	45%	0-35%	55%	0-35%	50%	0-30%
UMA	Stewardship B	40%	0-30%	50%	0-30%	40%	0-25%
	Extensive C	45%	0-35%	55%	0-35%	45%	0-30%
	Intensive D	50%	0-40%	60%	0-40%	50%	0-35%
WAW	Stewardship B	40%	0-30%	50%	0-30%	40%	0-25%
	Extensive C	45%	0-35%	55%	0-35%	45%	0-30%
	Intensive D	50%	0-40%	60%	0-40%	50%	0-35%
OCH	Stewardship B	40%	0-30%	50%	0-30%	40%	0-25%
	Extensive C	45%	0-35%	55%	0-35%	45%	0-30%
	Intensive D	50%	0-40%	55%	0-40%	50%	0-35%

* Does not mention level D.
Sat=satisfactory, Unsat = unsatisfactory

For the Umatilla National Forest, utilization of transitory range (where timber harvest has occurred during the last 30 years) shall not exceed 60 percent for domestic livestock.

Domestic Sheep Grazing

Wallowa-Whitman and Umatilla National Forests

Standard: Manage the conflict between bighorn sheep and domestic sheep in coordination with state wildlife agencies.

Malheur National Forest

Standard: Do not stock livestock allotments in bighorn sheep range with domestic sheep.

Table A-9. Management direction for maximum percent utilization of livestock grazing in riparian areas

National Forest	Management Level	Grass and grass-like		Shrubs	
		Sat	Unsat	Sat	Unsat
MAL*	Stewardship B	40%	0-30%	30%	0-25%
	Extensive C	45%	0-35%	40%	0-30%
UMA	Stewardship B	40%	0-30%	30%	0-25%
	Extensive C	45%	0-35%	40%	0-30%
	Intensive D	50%	0-40%	50%	0-35%
WAW	Stewardship B	40%	0-30%	30%	0-25%
	Extensive C	45%	0-35%	40%	0-30%
	Intensive D	50%	0-40%	50%	0-35%
OCH	Stewardship B	40%	0-30%	30%	0-25%
	Extensive C	45%	0-35%	40%	0-30%
	Intensive D	50%	0-40%	50%	0-35%

* Does not mention level D.
Sat=satisfactory, Unsat = unsatisfactory

Part 2: Description of the Plan Revision Alternatives

Introduction

The Forest Plans (appended to the draft Record(s) of Decision) describe plan components for the agency preferred alternative, E-Modified. This section describes how the plan revision alternatives (Alternatives B, C, D, E, E-Modified Departure, and F) differ from Alternative E-Modified.

The components of a forest plan include:

- Goals and desired conditions
- Management areas
- Special areas
- Suitable uses and activities
- Objectives
- Standards
- Guidelines
- Monitoring and evaluation

Laws and Regulations

All plan revision alternatives are designed to comply with applicable laws, regulations, and policies that govern the Forest Service and the management of National Forest System lands. This plan revision is guided by the 2012 Planning Rule that includes provisions allowing the Forest Service to use the 1982 planning rule to amend or revise plans. Generally, laws and regulations are not repeated in the text of the revised Forest Plans or in this appendix. A list of laws and regulations applicable to national forest planning is in Appendix B of this document.

Special Designations

All of the existing areas protected by special designations during the life of the 1990 forest plans maintain those special designations across the plan revision alternatives. Discussions of any additional special areas or proposed additional special areas are included in the individual action alternative descriptions.

Goals and Desired Conditions

The goals and desired conditions are common to each of the plan revision alternatives except for desired condition 2.7, Roads and Trail Access. The rate of achieving desired conditions may vary by alternative due to differences in the suitability of lands for different activities and to differences in management intensity as reflected by differences in objectives. The goals and desired condition statements for Alternatives E-Modified and E-Modified Departure were edited to improve clarity but are intended to achieve the same intent as described for the Alternatives B, C, D, E, and F in the Draft Environmental Impact Statement.

The three goals for the Malheur, Umatilla and Wallowa-Whitman National Forests Forest Plans are to: (1) promote ecological integrity, (2) promote social well-being, and (3) promote economic well-being. The plans are organized under these three goals with unique desired conditions, objectives, standards and guidelines for each goal (Table A-10). For the full text of the goals and desired conditions, refer to the forest plans in the Appendix to the draft Record of Decision.

Table A-10. Primary goals and corresponding desired conditions identified to meet the goals – Alternatives B, C, D, E, E-Modified, E-Modified Departure, and F

Goal 1: Promote Ecological Integrity

1.1 Watershed Function
- 1.1.1 Hydrologic Function
- 1.1.2 Riparian Function
- 1.1.3 Wetland Function and Groundwater-dependent Ecosystem Function
- 1.1.4 Stream Channel Function
- 1.1.5 Aquatic Habitat Function

1.2 Species Diversity
1.3 Federally Listed and Sensitive Species
1.4 Disturbance Processes
- 1.4.1 Wildland Fire
- 1.4.2 Insects and Diseases

1.5 Invasive Species
1.6 Structural Stages
1.7 Plant Species Composition
1.8 Stand Density
1.9 Air Quality
1.10 Soil Quality
1.11 Water Quality
1.12 Landscape Patterns
1.13 Special Plant Habitats
- 1.13.1 Whitebark Pine
- 1.13.2 Aspen
- 1.13.3 Sagebrush Steppe

1.14 Old Forest and Individual Old/Large Trees
1.15 Snags and Down Wood

Goal 2: Promote Social Well-Being

2.1 Scenery
- 2.1.1 Scenic Integrity and Scenic Stability

2.2 Recreation
- 2.2.1 Developed Recreation
- 2.2.2 Dispersed Recreation
- 2.2.3 Backcountry Recreation

2.3 Hunting and Fishing
- 2.3.1 Rocky Mountain Elk
- 2.3.2 Bighorn Sheep

2.4 Cultural Resources
2.5 Roads and Trails Access
2.6 Wildland Urban Interface
2.7 Tribal Rights and Interest
2.8 Culturally Significant Foods
2.9 Community Resilience
2.10 Wild Horses

Goal 3: Promote Economic Well-Being

3.1 Facilities and Infrastructure
3.2 Land Ownership
3.3 Goods and Services
- 3.3.1 Forest Products
- 3.3.2 Livestock Grazing
- 3.3.3 Special Uses
- 3.3.4 Mineral, Energy, and Geological Resources
- 3.3.5 Water Use

Alternative Elements (Plan Revision Alternatives)

As discussed in the introduction to Part 2—Comparison of the Plan Revision Alternatives, the alternative elements include discussion and comparison of some of the forest plan components, including management areas, suitability determinations, objectives, standards, and guidelines. Most forest plan management direction will be common to each of the three National Forests. Only where specifically noted will management direction be specific to only one of the National Forests.

Management Areas

Management areas broadly describe areas where general management intent is similar. The purpose of management areas is to provide consistent guidance for similar portions of the national forest landscape when implementing or continuing management activities. The management areas generally range along a continuum from little development by humans in MA 1A to extensive human development in MA 5.

Management area descriptions and intent do not vary by alternative except for MA 4B. Not all management areas occur in all alternatives. Table A-14 to Table A-17 list the management areas by national forest for each of the alternatives. These tables do not include the management area acre totals within the Hells Canyon National Recreation Area, but they do display the portion of the Ochoco National Forest administered by the Malheur National Forest.

Please refer to the Revised Forest Plans, appended to the Record of Decision, that describe the desired conditions for each management area, except for MA 3C – Wildlife Corridor, MA 4B – Riparian Management Areas, and MA 4C – Old Forest, which are described below.

MA 3C Wildlife Corridor (Alternatives C, E, and F)

Description: Wildlife corridors are areas designed to maintain habitat linkages between wilderness areas. Although disagreement exists regarding the utility of corridors, this management area emphasizes management for landscape connectivity, which is "the degree to which the landscape facilitates or impedes movement among resource patches," (Taylor et al. 1993) or "the functional relationship among habitat patches, owing to the spatial contagion of habitat and the movement responses of organisms to landscape structure," (With et al. 1997). A wide variety of vegetation structure and composition is present, with some showing evidence of past human disturbance and others showing affects primarily from natural disturbances, such as wildfires. Both summer and winter motor vehicle travel is restricted to designated routes. Recreation users can expect to find evidence of human activity in the form of vegetation management, mining, and road building. However, many of the roads that are closed to motor vehicle travel occur in these areas.

Desired Condition: Wildlife species using these areas experience minimal human disturbance. Thinning forested vegetation results in variable densities, with greater than 40 percent canopy cover, over greater than 75 percent of the area, during the life of the plan.

The social setting is one of little challenge and risk. The area's many routes may not be available for motor vehicle travel. Within HUC5 watersheds in this management area, year round open motor vehicle route density is less than 1 mile per square mile, including over-the-snow motor vehicle routes. Over-the-snow motor vehicle travel is restricted to designated routes. Major travelways (i.e., state, county, and paved roads) remain open year round, and may be groomed for over-the-snow motor vehicle use in winter. The recreation opportunity spectrum in MA3C is semi-primitive motorized.

MA 4B Riparian Management Areas

Description: Riparian management areas (RMAs) are areas that include portions of watersheds where aquatic and riparian-dependent resources receive primary emphasis and where special management direction applies. Riparian management areas encompass lands adjacent to permanently flowing streams, ponds, lakes, wetlands, seeps, springs, and intermittent streams, including geologically unstable sites that may influence these lands. Riparian management areas will generally have minimum widths (displayed in Table A-11, Table A-12, and Table A-13) but are designed to extend to the outer edge of riparian vegetation or to the outer extent of the 100-year floodplain, whichever is greater. Riparian management areas are managed to maintain and restore the riparian structure and function of intermittent and perennial streams, confer benefits to riparian-dependent plant and animal species, enhance habitat conservation for organisms that are dependent on the transition zone between upslope and riparian areas, and provide for greater connectivity within and between watersheds for both riparian and upland species.

Riparian vegetation performs numerous key functions for stream ecosystems, including the provision of shade, bank stability, nutrient transfer, retention of organic material, and the supply of woody material.

Because riparian plant species vary in their establishment mechanisms, water requirements, and tolerance to flooding, differences in channel and floodplain morphology result in high spatial and temporal variability in species composition and age class structure within and along riparian

zones. This makes riparian areas among the most biologically diverse and productive habitats on the landscape.

Table A-11. Riparian management area widths for alternatives B, E, and F

Category	Minimum Riparian Management Area Width*
Fish-bearing streams	300 feet slope distance on either side of stream or to outer edge of 100-year floodplain, whichever is greatest
Permanently-flowing non-fish-bearing streams	150 feet slope distance on either side of stream or to outer edge of 100-year floodplain, whichever is greatest
Constructed ponds, reservoirs and wetlands greater than 1 acre	150 feet slope distance from the outer edge of wetland or from the maximum pool elevation, whichever is greatest
Lakes and natural ponds	300 feet slope distance
Seasonally-flowing, intermittent and ephemeral streams, wetlands smaller than 1 acre, and unstable areas	100 feet slope distance

* Additional delineation criteria apply, as described in the glossary.

Table A-12. Riparian management area widths for alternative C

Category	Minimum Riparian Management Area Width*
Fish-bearing streams	300 feet slope distance on either side of stream
Permanently-flowing non-fish-bearing streams	300 feet slope distance on either side of stream
Constructed ponds, reservoirs and wetlands greater than 1 acre	300 feet slope distance
Lakes and natural ponds	300 feet slope distance
Seasonally-flowing, intermittent and ephemeral streams, wetlands smaller than 1 acre, and unstable areas	300 feet slope distance

* Additional delineation criteria apply, as described in the glossary.

Table A-13. Riparian management area widths for alternative D

Category	Minimum Riparian Management Area Width*
Fish-bearing streams	100 feet slope distance on either side of stream or to outer edge of 100-year floodplain, whichever is greatest
Permanently-flowing non-fish-bearing streams	70 feet slope distance on either side of stream or to outer edge of 100-year floodplain, whichever is greatest
Constructed ponds, reservoirs and wetlands greater than 1 acre	50 feet slope distance from the outer edge of wetland or from the maximum pool elevation, whichever is greatest
Lakes and natural ponds	50 feet slope distance
Seasonally-flowing, intermittent and ephemeral streams, wetlands smaller than 1 acre, and unstable areas	50 feet slope distance

* Additional delineation criteria apply, as described in the glossary.

Healthy riparian areas are important for the protection of the water quality upon which aquatic species depend and are also used by approximately 75 percent of terrestrial vertebrate species in the Blue Mountains (Raedeke 1989, Thomas 1979). In addition, riparian areas provide critical habitat for numerous sensitive, rare, or uncommon plant and lichen species. Management

activities within riparian management areas are designed to maintain, enhance, or restore the ecological processes responsible for the diversity, productivity, and sustainability of riparian habitats.

Management of riparian management areas focuses on the ecological processes and conditions within the riparian management areas and contributes to the value of the aquatic and riparian habitats they contain. The glossary describes the full definition and criteria for delineating riparian management areas.

Desired Condition: Riparian management areas within any given watershed reflect a natural composition of native and desired nonnative plant and animal species and a distribution of physical and vegetative conditions appropriate to natural disturbance regimes affecting the area.

Key riparian processes and conditions, including slope stability and associated vegetative root strength; wood delivery to streams; input of leafy and organic matter to aquatic and terrestrial systems; solar shading; microclimate; and water quality, are within ranges typical of the biophysical setting and the corresponding disturbance regime. The recreation opportunity spectrum in MA 4B is semi-primitive to primitive.

Acres associated with MA 4B are only those acres within MA 4A General Forest. However, the desired conditions and standards and guidelines that apply to MA 4B apply to all riparian management areas.

MA 4C Old Forest (Alternative C)

Description: Old forest is a late stage of stand development that develops over a relatively long period of time. Old forest has an abundance of physiologically old trees (for the species and site conditions) that are dominant in the overstory and are usually larger in diameter (see glossary for definition by potential vegetation group). Old forest is valued as wildlife habitat, contributions to riparian habitat, for recreation, and for aesthetic and cultural values.

Desired Condition: Old forest is maintained and restored to meet a wide variety of ecological and social values. Old forest provides habitat for wildlife, preserves aesthetic values, and contributes to landscape diversity. The amount of old forest is consistent with the HRV. See the ecological desired conditions for specific ranges for the percent of each upland forest or woodland potential vegetation group in old forest structural stages. The management of old forest is also guided by other ecological desired conditions, such as stand density, species composition, fire regime condition class, snags, and downed wood. The recreation opportunity spectrum in MA4C is semi-primitive motorized or nonmotorized.

Management Area Acreages (Plan Revision Alternatives)

The following tables display the management area designations and allocations for the plan revision alternatives. All management areas are displayed in full. Overlap occurs between most management areas but is not accounted for in these tables. The overlapping management areas result in the total acreage of all management areas being greater than the official national forest acreages. For example, several research natural areas (MA 2B) and wild and scenic rivers (MA 2A) overlap into congressionally designated wilderness areas (MA 1A).

Wilderness area acres have been recalculated using the most current GIS technology. No additions or subtractions to any wilderness areas have been made since the 1990 forest plans were signed. Acres of private land inclusions are not included in any wilderness area acre calculations.

Scenic byways and national designated trails within the HCNRA are not included in these tables. The figures in the tables are rounded to the nearest hundred acres and to the nearest whole mile. In addition, these tables do not include acreage for the HCNRA. The HCNRA CMP, which was updated and approved in 2003, will be carried forward in its entirety. The HCNRA CMP is the portion of the Wallowa-Whitman National Forest Land and Resource Management Plan that guides management of the HCNRA. The tables display the portion of the Ochoco administered by the Malheur as part of the Malheur.

Alternative B, Modified Proposed Action

Table A-14. Management area designation, name, and acreage for each national forest (2F and 2G show miles) in alternative B

Management Area Designation and Name	Malheur	Umatilla	Wallowa-Whitman
1A – Congressionally Designated Wilderness Areas	82,600	304,200	372,900
1B – Recommended Wilderness Areas	1,200	1,400	10,800
1C – Wilderness Study Area	0	0	2,400
2A – Wild and Scenic River (Includes Designated, Eligible, and Suitable Rivers)	12,100	44,600	84,400
2B – Research Natural Areas	11,100	11,000	8,000
2C – Botanical Areas	100	2,400	0
2D – Geological Areas	200	400	0
2E – Historical Areas	34,000	1,200	24,700
2F – Scenic Byways and All-American Roads	13 miles	51 miles	85 miles
2G – Nationally Designated Trails	9.3 miles	29.9 miles	25.4 miles
2H – Scenic Areas	14,400	31,100	0
2I – Starkey Experimental Forest and Range	0	0	30,453
2J – Municipal Watersheds	500	20,200	24,500
3A – Backcountry (nonmotorized use)	59,300	19,300	0
3B – Backcountry (motorized use)	129,100	240,900	248,900
3C – Wildlife Corridor	0	0	0
4A – General Forest	1,252,000	640,300	848,000
4B – Riparian Management Areas (300/150/100 foot buffer)	192,900	237,500	362,500
4B – Riparian Management Areas (within 4A)	149,900	118,700	184,600
4C – Old Forest	0	0	0
5 – Developed Sites and Administrative Areas	2,200	3,700	7,700

Alternative C

Table A-15. Management area designation, name, and acreage for each national forest (2F and 2G show miles) in alternative C

Management Area Designation and Name	Malheur	Umatilla	Wallowa-Whitman
1A – Congressionally Designated Wilderness Areas	82,600	304,200	372,900
1B – Recommended Wilderness Areas	83,800	248,500	172,700
1C – Wilderness Study Area	0	0	2,400
2A – Wild and Scenic River (Includes Designated, Eligible, and Suitable Rivers)	12,100	44,600	84,400
2B – Research Natural Areas	11,100	11,000	8,000
2C – Botanical Areas	100	2,400	0
2D – Geological Areas	200	400	0
2E – Historical Areas	34,000	1,200	0
2F – Scenic Byways and All-American Roads	13 miles	51 miles	85 miles
2G – Nationally Designated Trails	9 miles	30 miles	25 miles
2H – Scenic Areas	14,400	31,100	0
2I – Starkey Experimental Forest and Range	0	0	30,500
2J – Municipal Watersheds	500	20,200	24,500
3A – Backcountry (nonmotorized use)	270,400	105,800	210,100
3B – Backcountry (motorized use)	0	0	0
3C – Wildlife Corridor	167,700	91,900	242,600
4A – General Forest/Timber/Range	702,500	329,000	397,200
4B – Riparian Management Areas (300-foot buffers)	369,000	499,800	727,500
4B – Riparian Management Areas (within 4A)	172,400	178,100	200,900
4C – Old Forest	205,100	94,800	91,000
5 – Developed Sites and Administrative Areas	2,200	3,700	7,700

Alternative D

Table A-16. Management area designation, name, and acreage for each national forest (2F and 2G show miles) in alternative D

Management Area Designation and Name	Malheur	Umatilla	Wallowa-Whitman
1A – Congressionally Designated Wilderness Areas	82,600	304,200	372,900
1B – Recommended Wilderness Areas	0	0	0
1C – Wilderness Study Area	0	0	2,400
2A – Wild and Scenic River (Includes Designated, Eligible, and Suitable Rivers)	12,100	44,600	52,900
2B – Research Natural Areas	11,100	11,000	8,000
2C – Botanical Areas	100	2,400	0
2D – Geological Areas	200	400	0
2E – Historical Areas	34,000	1,200	24,700
2F – Scenic Byways and All-American Roads	13 miles	51 miles	85 miles
2G – Nationally Designated Trails	9 miles	30 miles	25 miles
2H – Scenic Areas	14,400	31,100	0
2I – Starkey Experimental Forest and Range	0	0	30,500
2J – Municipal Watersheds	500	20,200	24,500
3A – Backcountry (nonmotorized use)	0	0	0
3B – Backcountry (motorized use)	165,800	218,700	219,500
3C – Wildlife Corridor	0	0	0
4A – General Forest	1,359,800	742,300	998,700
4B – Riparian Management Areas (100/70/50 foot buffers)	83,100	106,900	162,900
4B – Riparian Management Areas (within 4A)	66,000	58,100	87,100
4C – Old Forest	0	0	0
5 – Developed Sites and Administrative Areas	2,200	3,700	7,700

Alternatives E and F

Table A-17. Management area designation, name, and acreage for each national forest (2F and 2G show miles) in alternatives E and F

Management Area Designation and Name	Malheur	Umatilla	Wallowa-Whitman
1A – Congressionally Designated Wilderness Areas	82,600	304,200	372,900
1B – Recommended Wilderness Areas	30,400	40,100	20,300
1C – Wilderness Study Area	0	0	2,400
2A – Wild and Scenic River (Includes Designated, Eligible, and Suitable Rivers)	12,100	44,600	52,900
2B – Research Natural Areas	11,100	11,000	8,000
2C – Botanical Areas	100	2,400	0
2D – Geological Areas	200	400	0
2E – Historical Areas	34,000	1,200	24,700
2F – Scenic Byways and All-American Roads	13 miles	51 miles	85 miles
2G – Nationally Designated Trails	9 miles	30 miles	25 miles
2H – Scenic Areas	14,400	31,100	0
2I – Starkey Experimental Forest and Range	0	0	30,500
2J – Municipal Watersheds	500	20,200	24,500
3A – Backcountry (nonmotorized use)	53,600	70,100	104,500
3B – Backcountry (motorized use)	119,100	160,600	145,500
3C – Wildlife Corridor	0	21,600	6,500
4A – General Forest	1,245,600	625,200	844,300
4B – Riparian Management Areas (300/150/100 foot buffer)	192,900	237,500	362,500
4C – Old Forest	0	0	0
5 – Developed Sites and Administrative Areas	2,200	3,700	7,700

Alternatives E-Modified and E-Modified Departure

Table A-18. Management area designation, name, and acreage for each national forest (2F and 2G show miles) in alternatives E-Modified and E-Modified Departure

Management Area Designation and Name	Malheur	Umatilla	Wallowa-Whitman
1A – Congressionally Designated Wilderness Areas	82,600	304,200	372,900
1B – Recommended Wilderness Areas	26,600	31,900	12,000
1C – Wilderness Study Area	0	0	2,400
2A – Wild and Scenic River (Includes Designated, Eligible, and Suitable Rivers)	12,100	44,400	52,900
2B – Research Natural Areas	11,100	11,000	8,000
2C – Botanical Areas	100	900	1,000
2D – Geological Areas	200	400	0
2E – Historical Areas	34,000	1,200	2,300
2F – Scenic Byways and All-American Roads	13 miles	51 miles	85 miles
2G – Nationally Designated Trails	9 miles	30 miles	25 miles
2H – Scenic Areas	14,400	31,100	0
2I – Starkey Experimental Forest and Range	0	0	30,500
2J – Municipal Watersheds	500	20,200	24,500
3A – Backcountry (non-motorized use)	47,200	49,700	31,700
3B – Backcountry (motorized use)	118,000	169,200	209,400
3C – Wildlife Corridor	0	0	0
4A – General Forest	1,250,200	648,000	861,400
4B – Riparian Management Areas (300/150/100-foot buffer)	192,900	237,500	362,500
4B – Riparian Management Areas (within 4A)	149,500	119,900	190,100
4C – Old Forest	0	0	0
5 – Developed Sites and Administrative Areas	2,200	7,500	7,700

Suitability of Areas

An area may be identified as generally suitable for uses that are compatible with desired conditions and objectives for that area. An area may be identified as generally not suitable for uses that are not compatible with desired conditions and objectives for that area. Identification of an area as generally suitable or generally not suitable for a use is guidance for project and activity decision making and not a commitment nor a final decision approving projects and activities. Uses of specific areas are approved through project and activity decisionmaking.

Management areas are used in this forest plan to help further refine suitable uses and guide management.

The management area designations and names follow:

1A Congressionally Designated Wilderness Areas
1B Preliminary Administratively Recommended Wilderness Areas
1C Wilderness Study Area
2A Wild and Scenic River (Includes Designated, Eligible, and Suitable Rivers)
2B Research Natural Areas
2C Botanical Areas
2D Geological Areas
2E Historical Areas
2F Scenic Byways and All American Roads
2G Nationally Designated Trails
2H Scenic Areas
2I Starkey Experimental Forest and Range
2J Municipal Watersheds
3A Backcountry (nonmotorized use)
3B Backcountry (motorized use)
3C Wildlife Corridors
4A General Forest
4B Riparian Management Areas
4C Old Forest
5 Developed Sites and Administrative Areas

For ease of comparison, general suitability determinations for management areas for each of the plan revision alternatives are displayed in the following tables. Some management areas are not proposed for each national forest or for each alternative. Suitability designations that differ from the agency preferred alternative (E-Modified), as displayed in the revised forest plans appended to the draft Record(s) of Decision, are noted with an asterisk.

Alternative B

Omits Management Area 4C - Old Forest and 3C - Wildlife Corridors.

Table A-19. General suitability matrix for management areas for alternative B

Use or Activity	1A	1B	1C	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J[3]	3A	3B	4A	4B	5
Timber production	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	U
Timber harvest	U	U	U	S	U	S	S	S	S	S	S	S	S	S	S	S	S	S
Grazing (cattle and sheep)	S	S	S	S	U	U	S	S	S	S	S	S	U	S	S	S	S	U
Motor vehicle use (summer)[1]	U	U	U	U[2]	U	S	S	S	S	**S***	S	**U***	U	U	S	S	S	S
Motor vehicle use (winter)	U	**S***	U	U[2]	U	S	S	S	S	S	S	**U***	U	U	S	S[1]	S	S
Road construction	U	U	U	U[2]	U	U	S	S	S	U	S	**U***	U	U	U	S	U	S
Trail construction (for motor vehicle use)	U	U	U	U[2]	U	U	S	S	S	U	S	**U***	U	U	S	S	U	S
Mechanical fuel treatment	U	U	U	U[2]	U	U	S	S	S	S	S	S	S	S	S	S	S	S
Energy development (wind farms, utility corridors, pipelines, etc.)	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	S

S designates use or activity as generally suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

U designates use or activity as generally not suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

***** Suitability designation differs from agency preferred alternative, E-Modified.

1. indicates generally suitable applies only to use or activity on designated roads and trails and within designated areas.
2. indicates generally not suitable for wild and scenic rivers, generally suitable for recreational rivers.
3. All activities in municipal watersheds are dependent on the agreement for management of the watershed between the Forest Service and the municipality.

Alternative C

Omits Management Area 3B - Backcountry (motorized use) and includes Management Areas 3C - Wildlife Corridors and 4C - Old Forest.

Table A-20. General suitability matrix for management areas for alternative C

Use or Activity	1A	1B	1C	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J[3]	3A	3C	4A	4B	4C	5
Timber production	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	U	U
Timber harvest	U	U	U	S	U	S	S	S	S	S	S	S	S	**U***	S	S	**U***	**U***	**U***
Grazing (cattle and sheep)	S	S	S	S	U	U	S	S	S	S	S	S	U	S	S	S	**U***	S	**S***
Motor vehicle use (summer)[1]	U	U	U	U[2]	U	S	S	S	S	**S***	S	**U***	U	U	U	S	**U***	U	**U***
Motor vehicle use (winter)	U	U	U	U[2]	U	S	S	S	S	S	S	**U***	U	U	S[1]	S	**U***	U	**U***
Road construction	U	U	U	U[2]	U	U	S	S	S	U	S	**U***	U	U	U	S	U	U	**U***
Trail construction (for motor vehicle use)	U	U	U	U[2]	U	U	S	S	S	U	S	**U***	U	U	U	S	U	U	**U***
Mechanical fuel treatment	U	U	U	U[2]	U	U	S	S	S	S	S	S	S	**U***	S	S	**U***	S	S
Energy development (wind farms, utility corridors, pipelines, etc.)	U	U	U	U	U	U	**S***	**S***	**S***	**S***	**S***	**S***	**S***	U	S	S	U	U	S

S designates use or activity as generally suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

U designates use or activity as generally not suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

***** Suitability designation differs from agency preferred alternative, E-Modified.

1. indicates generally suitable applies only to use or activity on designated roads and trails and within designated areas.
2. indicates generally not suitable for wild and scenic rivers, generally suitable for recreational rivers.
3. All activities in municipal watersheds are dependent on the agreement for management of the watershed between the Forest Service and the municipality.

Alternative D

Omits Management Areas 3A – Backcountry (nonmotorized use), 3C - Wildlife Corridors, and 4C – Old Forest.

Table A-21. General suitability matrix for management areas for alternative D

Use or Activity	1A	1C	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J[3]	3B	4A	4B	5
Timber production	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	U
Timber harvest	U	U	S	U	S	S	S	S	S	S	S	S	S	S	S	**S***
Grazing (cattle and sheep)	S	S	S	U	U	S	S	S	S	S	S	U	S	S	S	U
Motor vehicle use (summer)[1]	U	U	U[2]	U	S	S	S	S	**S***	**S***	**U***	**U***	S	S	S	S
Motor vehicle use (winter)	U	U	U[2]	U	S	S	S	S	S	S	**U***	U	S	S[1]	S	S
Road construction	U	U	U[2]	U	U	S	S	S	U	S	**U***	U	U	S	U	S
Trail construction (for motor vehicle use)	U	U	U[2]	U	U	S	S	S	U	S	U	U	S	S	U	S
Mechanical fuel treatment	U	U	U[2]	U	U	S	S	S	S	S	S	S	S	S	S	S
Energy development (wind farms, utility corridors, pipelines, etc.)	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	S

S designates use or activity as generally suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

U designates use or activity as generally not suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

***** Suitability designation differs from agency preferred alternative, E-Modified.

1. indicates generally suitable applies only to use or activity on designated roads and trails and within designated areas.
2. indicates generally not suitable for wild and scenic rivers, generally suitable for recreational rivers.
3. All activities in municipal watersheds are dependent on the agreement for management of the watershed between the Forest Service and the municipality.

Alternatives E and F

Omits Management Area 4C – Old Forest.

Table A-22. General suitability matrix for management areas for alternatives E and F

Use or Activity	1A	1B	1C	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J[3]	3A	3B	3C	4A	4B	5
Timber production	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	U
Timber harvest	U	U	U	S	U	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Grazing (cattle and sheep)	S	S	S	S	U	U	S	S	S	S	S	S	U	S	S	S	S	S	U
Motor vehicle use (summer)[1]	U	U	U	U[2]	U	S	S	S	S	**S***	S	**U***	U	U	S	S	S	S	S
Motor vehicle use (winter)	U	**S***	U	U[2]	U	S	S	S	S	S	S	**U***	U	U	S	S[1]	S	S	S
Road construction	U	U	U	U[2]	U	U	S	S	S	U	S	**U***	U	U	U	S	S	U	S
Trail construction (for motor vehicle use)	U	U	U	U[2]	U	U	S	S	S	U	S	**U***	U	U	S	S	S	U	S
Mechanical fuel treatment	U	U	U	U[2]	U	U	S	S	S	S	S	S	S	S	S	S	S	S	S
Energy development (wind farms, utility corridors, pipelines, etc.)	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	S

S designates use or activity as generally suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

U designates use or activity as generally not suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

***** Suitability designation differs from agency preferred alternative, E-Modified.

1. indicates generally suitable applies only to use or activity on designated roads and trails and within designated areas.
2. indicates generally not suitable for wild and scenic rivers, generally suitable for recreational rivers.
3. All activities in municipal watersheds are dependent on the agreement for management of the watershed between the Forest Service and the municipality.

Alternatives E-modified and E-Modified Departure

Table A- 23. General suitability matrix for management areas for Alternatives E-Modified and E-Modified Departure

Use or Activity	1A	1B	1C	2A[2]	2B	2C	2D	2E	2F	2G[4]	2H	2I	2J[5]	3A	3B	4A	4B	5
Timber production	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	U
Timber harvest[3]	U	U	U	S	U	S	S	S	S	S	S	S	S	S	S	S	S	S
Grazing (cattle and sheep)	S	S	S	S	U	U	S	S	S	S	S	S	U	S	S	S	S	U
Motor vehicle use[1] (summer)	U	U	U	U	U	S	S	S	S	U	S	S	U	U	S	S	S	S
Motor vehicle use (winter)	U	U	U	U	U	S	S	S	S	S	S	S	U	U	S	S	S	S
New Road construction	U	U	U	U	U	U	S	S	S	U	S	S	U	U	U	S	U	S
New Trail construction (for motor vehicle use)	U	U	U	U	U	U	S	S	S	U	S	S	U	U	S	S	U	S
Mechanical fuel treatment	U	U	U	U	U	U	S	S	S	S	S	S	S	S	S	S	S	S
Energy development (wind farms, utility corridors, pipelines, etc.)	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	S[6]

S designates use or activity as suitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

U designates use or activity as unsuitable. Refer to desired conditions and standards and guidelines for each management area and/or use for specific guidance.

1. Indicates suitable applies only to use or activity on roads, trails, and areas open to motor vehicle use that are in compliance with the Travel Management Rule (36 CFR 212).
2. Indicates not suitable for river segments classified as wild rivers, suitable for river segments classified as scenic and recreational rivers.
3. Vegetation in areas suitable for timber harvest shall not be subject to regularly scheduled timber production (regularly schedule timber harvest on suitable lands); since they are not part of our timber suitability landbase.
4. Establishing legislation may influence whether motorized use is allowed.
5. All activities in municipal watersheds are dependent on the agreement for management of the watershed between the Forest Service and the municipality.
6. Energy development is only suitable in designated utility corridors.

Objectives (Plan Revision Alternatives)

Objectives are projections of Forest Service activities and program outcomes that are measurable and time specific. Like goals and desired conditions, objectives are not commitments or final decisions approving projects or activities. They are a way to measure progress towards meeting or maintaining the desired conditions over the life of the plan. The objectives reflect activities and program outcomes necessary to maintain or achieve desired conditions.

Objectives are based on ecological needs, community capacity, and expected funding, including budgets, partnerships, and cooperative agreements. The actual accomplishments will be dependent on actual funding, staffing levels, and local infrastructure. The objectives are not intended to limit or guarantee the amount of work that will be accomplished. More work may be accomplished if additional infrastructure or funding, such as increased budget allocations, partnerships, or other external sources, becomes available. Less work could occur if funding is less than expected, additional infrastructure is not constructed, or existing infrastructure declines and becomes unusable.

The identified objectives are just a partial list of the management activities expected to be accomplished to contribute to maintaining or achieving desired conditions during the first decade of the plan period, unless otherwise indicated within the objective statement. Objectives are displayed separately for each the Blue Mountains national forests (Table A-24 to Table A-26). The tables display the portion of the Ochoco administered by the Malheur as part of the Malheur.

More detail regarding the anticipated annual silvicultural, invasive and grazing accomplishments are provided in Table A-24 to Table A-26.

Malheur National Forest Objectives

Table A-24. Comparison of objectives for the plan revision alternatives for the Malheur National Forest. The objectives are just a partial list of the management activities expected to be accomplished to contribute to maintaining or achieving desired conditions during the first decade of the plan period, unless otherwise indicated within the objective statement.

1.1 Watershed Function[3]

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
(W1) Increase the number of watersheds in condition class 1 (from CC2) and 2 (from CC3) through active restoration. Measure: number of subwatersheds (HUC6) with improved condition class.	16 watersheds	20 watersheds	16 watersheds	16 watersheds	16 watersheds
Improve hydrologic function by: • Improving forest vegetative conditions (acres) (WH1)	4,400 acres (annually)	2,000 acres (annually)	20,700 acres (annually)	Alt. E: 7,800 acres Alts. E-Mod. and E-Mod. Dep: 5,500 acres (annually)	5,600 acres (annually)
• Improving soil hydrologic function in areas of detrimental soil disturbance (acres) (WH2)	450 acres	800 acres	400 acres	600 acres	540 acres
• Reducing road-related sedimentation by reducing road density and reducing hydrologic connectivity of the road system (road miles) (WH3)	25-30 miles road surface treated (annually)	45-75 miles road surface treated (annually)	50-80 miles road surface treated (annually)	30-35 miles road surface treated (annually)	30-35 miles road surface treated (annually)
Improve riparian and wetland function by: • Restoring floodplain connections, channel morphology, channel structure, and flow regime (flood flows and low flows) (stream miles) (WR1)	55 miles	60 miles	50 miles	80 miles	75 miles
• Restoring riparian/wetland species composition (riparian acres) by increasing natural seedling establishment, planting, fencing, or modifying riparian management (riparian acres) (WR2)	200 acres	300 acres	200 acres	300 acres	275 acres

[3] All measures are proposed in priority watersheds.

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
• Increasing effective stream shade (WQ objective 1) by increasing amount and extent of woody riparian species and increasing age-class structure of terrestrial vegetation in MA 4B (stream miles) (WR3)	300 miles	600 miles	300 miles	450 miles	400 miles
Improve riparian and wetland function by (continued): • Increasing extent and vegetative species diversity of off-channel and isolated wetlands by restoring hydrologic pathways, modifying existing water diversions, or fencing (number of sites) (WR4)	20 sites	30 sites	30 sites	30 sites	30 sites
• Increasing the number and extent of beaver-created wetlands (sites)	10 sites	15 sites	10 sites	12 sites	10 sites
Improve stream channel and aquatic habitat function by: • Improving riparian habitat conditions (riparian acres, WR1-3)	400 acres (annually)	900 acres (annually)	900 acres (annually)	600 acres (annually)	570 acres (annually)
• Restoring channel morphology to reflect natural conditions (miles)	25 miles	40 miles	25 miles	38 miles	35 miles
• Increasing habitat complexity through channel reconstruction, placement of large wood or other structures, habitat enhancement (miles)	50 miles	170 miles	50 miles	75 miles	70 miles
• Increasing aquatic habitat connectivity through culvert replacement (number of culverts)	60 culverts 90 stream miles	100 culverts 125 stream miles	60 culverts 95 stream miles	90 culverts 143 stream miles	80 culverts 140 stream miles

1.2 Species Diversity

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
In cooperation with state wildlife agencies, expand bull trout occurrence within 10 years into unoccupied suitable stream segments within its historic range.	1 segment	2 segments	0 segments	1 segment	1 segment
Increase the amount and quality of source habitat (open, OFSS in the dry upland forest potential vegetation group) for white-headed woodpecker (per decade).	31,000 acres	26,000 acres	58,000 acres	64,000 acres	32,000 acres
Increase the amount and quality of source habitat (open canopy dry/moist upland forest potential vegetation group) for western bluebird and Cassin's finch.	43,000 acres (finch)	27,000 acres (finch)	69,000 acres (finch) 11,000 acres (bluebird)	49,000 acres (finch)	37,000 acres (finch)
Maintain mule deer security cover on a percentage of the landscape within MA 4A.	26% of landscape	28% of landscape	24% of landscape	24% of landscape	26% of landscape
Restore stronghold watersheds connectivity for aquatic species.	6-10 subwatersheds or 120-200 stream miles	8-12 subwatersheds or 160-240 stream miles	3-5 subwatersheds or 60-100 stream miles	4-6 subwatersheds or 80-120 stream miles	4-6 subwatersheds or 80-120 stream miles
Reduce juniper canopy cover to less than 10 percent in sagebrush steppe habitat.	NA	NA	NA	800 acres	800 acres
Reduce sagebrush density to less than 10 percent canopy cover in sagebrush steppe habitats where sagebrush canopy cover is greater than 25 percent.	NA	NA	NA	700 acres	700 acres
In nesting habitat, retrofit existing tall structures (e.g., power poles, communication tower sites) with perch deterrents or other anti-perching devices within 2 years of signing the record of decision (ROD).	NA	NA	NA	Alt E: NA Alts. E-Mod & E-Mod. Dep: All tall structures	NA

1.4 Disturbance Processes

1.4.1 Wildland Fire (planned and unplanned ignitions)

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Treat stands using silvicultural treatments and/or prescribed burning (planned ignition) to move towards Fire Regime Condition Class 1 and 2 in the dry and moist upland forest potential vegetation groups (per decade).	166,000 acres	129,000 acres	205,000 acres	Alt. E: 220,000 acres Alts. E-Mod & E-Mod. Dep: 240,000 acres	178,000 acres
Treat stands using silvicultural treatments and/or prescribed burning (planned ignition) to decrease the potential for high severity wildfire in the dry upland forest potential vegetation group (per decade).	150,000 acres	115,000 acres	180,000 acres	185,000 acres	155,000 acres
Manage wildfire (unplanned ignition) for resource benefits: modify species composition, stand density, structural stages, fire frequency, and fire severity to move Fire Regime Condition Class 2 and 3 to Fire Regime Condition Class 1 and 2 (per decade).	NA	86,000 acres	NA	Alt. E: 39,000 acres Alts. E-Mod & E-Mod. Dep: 64,000 acres	39,000 acres

1.4.2 Insects and Diseases

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Within the dry upland forest potential vegetation group, treat stands with moderate to high susceptibility ratings using silvicultural treatments and/or wildland fire to decrease insect and disease susceptibility to low or moderate (per decade).	170,000 acres	130,000 acres	230,000 acres	Alt. E: 225,000 acres Alts. E-Mod & E-Mod. Dep: 243,000 acres	180,000 acres
Within the moist upland forest potential vegetation group, treat stands with moderate to high susceptibility ratings using silvicultural treatments and/or wildland fire to decrease insect and disease susceptibility to low or moderate (per decade).	20,000 acres	15,000 acres	25,000 acres	Alt. E: 25,000 acres Alts. E-Mod & E-Mod. Dep: 7,000 acres	20,000 acres

1.5 Invasive Species

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Reduce current infestations of invasive plant species.	1,500 acres	1,500 acres	3,000 acres	1,500 acres	1,500 acres

1.6 Structural Stages

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Decrease mid-age multi-story forest (UR stage) in the dry and moist upland forest potential vegetation groups by continuing to manage towards a large diameter (old forest) condition (per decade).	130,000 acres	100,000 acres	160,000 acres	Alt. E: 180,000 acres Alts E-Mod & E-Mod. Dep: 223,000 acres	140,000 acres
Increase OFSS (open canopy) in the dry upland forest potential vegetation group by converting OFMS to OFSS (per decade).	8,000 acres	1,500 acres	48,000 acres	Alt. E: 16,000 acres Alts. E-Mod & E-Mod. Dep: 16,000 acres	10,000 acres

1.7 Plant Species Composition

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Increase shade intolerant stands in the dry upland forest potential vegetation group (per decade).	170,000 acres	130,000 acres	230,000 acres	Alt. E: 225,000 acres Alts. E-Mod & E-Mod. Dep: 237,000 acres	180,000 acres
Manage rangeland vegetation to improve phases C and D to phase A or B.	NA	NA	NA	Alt. E: 7,000 acres Alts. E-Mod & E-Mod. Dep: 20,560 acres	7,000 acres

1.8 Stand Density

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Reduce the dry and moist upland forest potential vegetation groups that are in the closed stand density class (per decade).	166,000 acres	129,000 acres	205,000 acres	Alt. E: 220,000 acres Alts. E-Mod & E-Mod. Dep: 77,000 acres	178,000 acres

1.10 Soil Quality

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Implement erosion control and stabilization measures on unstable hillslopes. Possible activities include road realignment and improving forest vegetation conditions.	200-400 acres	300-500 acres	150-250 acres	200-400 acres	180-350 acres
Restore soil function (also see objectives for 1.1 Watershed Function).	150-300 acres	200-400 acres	75-150 acres	175-350 acres	150-300 acres

1.11 Water Quality

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Improve water quality through implementation of water quality restoration plans.	4-8 watersheds 160-320 stream miles	6-10 watersheds 240-400 stream miles	3-6 watersheds 120-240 stream miles	4-6 watersheds 160-240 stream miles	4-6 watersheds 120-220 stream miles

2.3.1 Rocky Mountain Elk

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Increase instances of elk occupancy and use of NFS lands by: • moving towards vegetative desired conditions and objectives to promote a mosaic patchwork of hiding cover and forage; and • providing a continuum of effective elk security in strategic locations. See objectives for vegetation (1.1, 1.4-1.8, and 1.12). See objectives for 2.7.	NA	NA	NA	Alt. E: NA Alts E-Mod & E-Mod. Departure: Within 7 years of plan approval, improve elk security to within Desired Condition range (30-100%) throughout 50% of the priority subwatershed. Within 15 years of plan approval, improve elk security to within Desired Condition range (30-100%) throughout 100% of the priority subwatershed. Within the life of the plan, improve elk security to within Desired Condition range (30-100%) throughout 50% of General Forest MA – 4A	NA

2.7 Roads and Trails Access

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Maintain the road system for safe and efficient travel and for the protection, management, and use of NFS lands. Where open motor vehicle route density exceeds desired conditions, implement route closures and/or decommissioning or consider designating routes for other uses (refer to 1.1 Watershed Function for road decommissioning/obliteration objectives).	Miles of road maintenance: 225 miles MLs 4/5 27 miles ML 3 900 miles ML 2 (annually)	Miles of road maintenance: 160 miles ML 4/5 11 miles ML 3 64 miles ML 2 (annually)	Miles of road maintenance: 280 miles MLs 4/5 44 miles ML 3 1,280 miles ML 2 (annually)	ALT E: Miles of road maintenance: 250 miles MLs 4/5 38 miles ML 3 1,025 miles ML 2 (annually) Alts E-Mod & E-Mod. Dep: There are no objectives for road maintenance	Miles of road maintenance: 240 miles MLs 4/5 35 miles ML 3 1,000 miles ML 2 (annually)

3.3 Goods and Services

Objective Statements for the Malheur National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Contribute to local economies by harvesting sawlogs and timber volume other than sawlogs (TSPQ annually).	45 MMBF	16 MMBF	141 MMBF	Alt E: 83 MMBF Alt. E-Modified: 84 MMBF Alt. E-Mod. Dep.: 134 MMBF	58 MMBF
Contribute to local economies by providing forage for cattle and sheep.	126,500 AUMs (annually)	62,200 AUMs (annually)	125,500 AUMs (annually)	Alt. E: 123,500 AUMs (annually) Alts. E-Mod & E-Mod Dep.: 133,500 AUMs	123,500 AUMs (annually)

Umatilla National Forest Objectives

Table A-25. Comparison of objectives for the plan revision alternatives for the Umatilla National Forest. The objectives are just a partial list of the management activities expected to be accomplished to contribute to maintaining or achieving desired conditions during the first decade of the plan period, unless otherwise indicated within the objective statement.

1.1 Watershed Function[4]

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
(W1) Increase the number of watersheds in condition class 1 (from CC2) and 2 (from CC3). Measure: number of subwatersheds (HUC6) with improved condition class.	15 watersheds	20 watersheds	12 watersheds	14 watersheds	14 watersheds
Improve hydrologic function by: • Improving forest vegetative conditions (acres) (WH1)	2,500 acres (annually)	1,500 acres (annually)	12,600 acres (annually)	Alt. E: 6,600 acres (annually) Alts. E-Mod & E-Mod. Dep: 3,200 acres	3,700 acres (annually)
• Improving soil hydrologic function in areas of detrimental soil disturbance (acres) (WH2)	500 acres	900 acres	450 acres	750 acres	700 acres
• Reducing road-related sedimentation by reducing road density and reducing hydrologic connectivity of the road system (road miles) (WH3)	25-30 miles road surface treated (annually)	45-75 miles road surface treated (annually)	50-80 miles road surface treated (annually)	30-35 miles road surface treated (annually)	30-35 miles road surface treated (annually)
Improve riparian and wetland function by: • Restoring floodplain connections, channel morphology, channel structure, and flow regime (flood flows and low flows) (stream miles) (WR1)	60 miles	70 miles	55 miles	90 miles	85 miles
• Restoring riparian/wetland species composition (riparian acres) by increasing natural seedling establishment, planting, fencing, or modifying riparian management (riparian acres) (WR2)	110 acres	200 acres	110 acres	165 acres	150 acres

[4] All measures are proposed in priority watersheds.

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
• Increasing effective stream shade (WQ objective 1) by increasing amount and extent of woody riparian species and increasing age-class structure of terrestrial vegetation in MA 4B (stream miles) (WR3)	150 miles	300 miles	150	225 miles	210 miles
• Increasing extent and vegetative species diversity of off-channel and isolated wetlands by restoring hydrologic pathways, modifying existing water diversions, or fencing (number of sites) (WR4)	25 sites	35 sites	35 sites	40 sites	35 sites
• Increasing the number and extent of beaver-created wetlands (sites)	8 sites	15 sites	8 sites	10 sites	9 sites
Improve stream channel and aquatic habitat function by: • Improving riparian habitat conditions (riparian acres, WR1-3)	350 acres (annually)	800 acres (annually)	600 acres (annually)	525 acres (annually)	500 acres (annually)
• Restoring channel morphology to reflect natural conditions (miles)	30 miles	55 miles	30 miles	45 miles	40 miles
• Increasing habitat complexity through channel reconstruction, placement of large wood or other structures, habitat enhancement (miles)	60 miles	200 miles	60 miles	90 miles	85 miles
• Increasing aquatic habitat connectivity through culvert replacement (number of culverts)	50 culverts 45 stream miles	75 culverts 60 stream miles	50 culverts 45 stream miles	75 culverts 68 stream miles	70 culverts 60 stream miles

1.2 Species Diversity

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
In cooperation with state wildlife agencies, expand bull trout occurrence within 10 years into unoccupied suitable stream segments within its historic range.	1 segment	2 segments	0 segments	1 segment	1 segment

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Increase the amount and quality of source habitat (open, OFSS single story LOS in the dry upland forest potential vegetation group) for white-headed woodpecker (per decade).	9,000 acres	8,000 acres	16,000 acres	12,000 acres	10,000 acres
Increase the amount and quality of source habitat (open canopy dry/moist upland forest potential vegetation group) for western bluebird and Cassin's finch.	44,000 acres (bluebird)	28,000 acres (bluebird)	91,000 acres (bluebird)	78,000 acres (bluebird)	53,000 acres (bluebird)
Maintain mule deer security cover on a percentage of the landscape within MA 4A.	33%	33%	28%	Alt. E: 29% Alts. E-Mod. and E-Mod. Dep.: N/A	32%
Restore stronghold watersheds connectivity for aquatic species.	5-9 subwatersheds or 100-180 stream miles	8-10 subwatersheds or 160-200 stream miles	4-6 subwatersheds or 80-120 stream miles	3-5 subwatersheds or 60-100 stream miles	3-5 subwatersheds or 60-100 stream miles
Develop and Implement habitat management plans for Spalding's catchfly key conservation areas.	NA	NA	NA	Alt E: N/A Alts. E-Mod. and E-Mod. Dep.: Lick Creek key conservation area (aka Blue Mountain Foothills KCA)	NA

1.4 Disturbance Processes

1.4.1 Wildland Fire (planned and unplanned ignitions)

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Treat stands using silvicultural treatments and prescribed burning (planned ignition) to move towards Fire Regime Condition Class 1 and 2 in the dry and moist upland forest potential vegetation groups (per decade).	170,000 acres	140,000 acres	200,000 acres	Alt. E: 220,000 acres Alts. E-Mod. and E-Mod. Dep.: 135,000 acres	180,000 acres

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Treat stands using silvicultural treatments and prescribed burning (planned ignition) to decrease the potential for high severity wildfire in the dry upland forest potential vegetation group (per decade).	95,000 acres	80,000 acres	110,000 acres	Alt. E: 125,000 acres Alts. E-Mod. and E-Mod. Dep.: N/A	100,000 acres
Manage wildfire (unplanned ignition) for resource benefits: modify species composition, stand density, structural stages, fire frequency, and fire severity to move Fire Regime Condition Classes 2 and 3 to Fire Regime Condition Classes 1 and 2 (per decade).	NA	52,000 acres	NA	Alt. E: 37,000 acres Alts. E-Mod. and E-Mod. Dep.: 45,000 acres	35,000 acres

1.4.2 Insects and Diseases

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Within the dry upland forest potential vegetation group, treat stands with moderate to high susceptibility ratings using silvicultural treatments and/or wildland fire to decrease insect and disease susceptibility to low or moderate (per decade).	120,000 acres	100,000 acres	140,000 acres	Alt. E:155,000 acres Alts. E-Mod. and E-Mod. Dep.: 124,000 acres	125,000 acres
Within the moist upland forest potential vegetation group, treat stands with moderate to high susceptibility ratings using silvicultural treatments and/or wildland fire to decrease insect and disease susceptibility to low or moderate (per decade).	40,000 acres	35,000 acres	50,000 acres	Alt. E:55,000 acres Alts. E-Mod. and E-Mod. Dep.: 23,000 acres	45,000 acres

1.5 Invasive Species

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Reduce current infestations of invasive plant species.	7,000 acres	7,000 acres	15,000 acres	7,000 acres	7,000 acres

1.6 Structural Stages

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Decrease mid-age multi-story forest (UR stage) in the dry and moist upland forest potential vegetation groups by continuing to manage towards a large diameter (old forest) condition (per decade).	140,000 acres	110,000 acres	160,000 acres	Alt E: 175,000 acres Alts. E-Mod. and E-Mod. Dep.: 118,000 acres	145,000 acres
Increase the OFSS (open canopy) stage in the dry upland forest potential vegetation group by converting OFMS to OFSS (per decade).	2,500 acres	0 acres	17,000 acres	Alt E: 6,000 acres Alts. E-Mod. and E-Mod. Dep.: 5,000 acres	3,000 acres

1.7 Plant Species Composition

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Increase shade intolerant stands in the dry upland forest potential vegetation group (per decade).	120,000 acres	100,000 acres	140,000 acres	Alt E: 155,000 acres Alts. E-Mod. and E-Mod. Dep.: 123,000 acres	125,000 acres
Manage rangeland vegetation to improve phases C and D to phase A or B.	NA	NA	NA	Alt E: 6,000 acres Alts. E-Mod. and E-Mod. Dep.: 8,790 acres	6,000 acres

1.8 Stand Density

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Reduce the dry and moist upland forest potential vegetation groups that are in the closed stand density class (per decade).	170,000 acres	140,000 acres	200,000 acres	Alt E: 220,000 acres Alts. E-Mod. and E-Mod. Dep.: 56,000 acres	180,000 acres

1.10 Soil Quality

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Implement erosion control and stabilization measures on unstable hillslopes. Possible activities include road realignment and improving forest vegetation conditions.	200-400 acres	300-500 acres	150-250 acres	200-400 acres	200-360 acres
Restore soil function (also see objectives for 1.1 Watershed Function).	150-300 acres	200-400 acres	75-150 acres	175-350 acres	160-320 acres

1.11 Water Quality

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Improve water quality through implementation of water quality restoration plans.	5-7 watersheds 200-280 stream miles	6-10 watersheds 240-400 stream miles	4-6 watersheds 160-240 stream miles	5-7 watersheds 200-280 stream miles	5-7 watersheds 200-280 stream miles

2.3.1 Rocky Mountain Elk

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Increase instances of elk occupancy and use of NFS lands by: • moving towards vegetative desired conditions and objectives to promote a mosaic patchwork of hiding cover and forage; and • providing a continuum of effective elk security in strategic locations. See objectives for vegetation (1.1, 1.4-1.8, and 1.12). See objectives for 2.7.	N/A	N/A	N/A	Alt E: N/A Alts. E-Modified and E-Modified Departure: Within 7 years of plan approval, improve elk security to within Desired Condition range (30-100%) throughout 50% of the priority subwatershed. Within 15 years of plan approval, improve elk security to within Desired Condition range (30-100%) throughout 100% of the priority subwatershed. Within the life of the plan, improve elk security to within Desired Condition range (30-100%) throughout 50% of General Forest MA 4A	N/A

2.7 Roads and Trails Access

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Maintain the road system for safe and efficient travel and for the protection, management, and use of NFS lands. Where open motor vehicle route density exceeds desired conditions, implement route closures and/or decommissioning or consider designating routes for other uses (refer to 1.1 Watershed Function for road decommissioning/obliteration objectives).	Miles of road maintenance: 158 miles MLs 4/5 159 miles ML 3 110 miles ML 2 (annually)	Miles of road maintenance: 100 miles MLs 4/5 79 miles ML 3 30 miles ML 2 (annually)	Miles of road maintenance: 210 miles ML 4/5 300 miles ML 3 400 miles ML 2 (annually)	Miles of road maintenance: 200 miles ML 4/5 200 miles ML 3 140 miles ML 2 (annually)	Miles of road maintenance: 158 miles MLs 4/5 159 miles ML 3 110 miles ML 2 (annually)

3.3 Goods and Services

Objective Statements for the Umatilla National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Contribute to local economies by harvesting sawlogs and timber volume other than sawlogs (TSPQ annually).	29 MMBF	16 MMBF	76 MMBF	Alt E: 57 MMBF Alt E-Mod.: 56 MMBF Alt E-Mod. Dep.: 94 MMBF	36 MMBF
Contribute to local economies by providing forage for cattle and sheep.	35,600 AUMs annually	4200 AUMs annually	35,800 AUMs annually	Alt E: 35,800 AUMs annually Alts. E-Mod. and E-Mod. Dep.: 49,200 AUMs annually	35,800 AUMs annually

Wallowa-Whitman National Forest Objectives

Table A-26. Comparison of objectives for the plan revision alternatives for the Wallowa-Whitman National Forest. The objectives are just a partial list of the management activities expected to be accomplished to contribute to maintaining or achieving desired conditions during the first decade of the plan period, unless otherwise indicated within the objective statement.

1.1 Watershed Function[5]

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
(W1) Increase the number of watersheds in condition class 1 (from CC2) and 2 (from CC3) through active restoration. Measure: number of subwatersheds (HUC6) with improved condition class.	24 watersheds	30 watersheds	24 watersheds	24 watersheds	24 watersheds
Improve hydrologic function by: • Improving forest vegetative conditions (acres) (WH1)	3,500 acres (annually)	2,100 acres (annually)	17,700 acres (annually)	Alt E: 7,300 acres (annually) Alts. E-Mod. and E-Mod. Dep.: 5,000 acres	4,600 acres (annually)
• Improving soil hydrologic function in areas of detrimental soil disturbance (acres) (WH2)	650 acres	1,200 acres	600 acres	950 acres	850 acres
• Reducing road-related sedimentation by reducing road density and reducing hydrologic connectivity of the road system (road miles) (WH3)	25-30 miles road surface treated (annually)	45-75 miles road surface treated (annually)	50-80 miles road surface treated (annually)	30-35 miles road surface treated (annually)	30-35 miles road surface treated (annually)
Improve riparian and wetland function by: • Restoring floodplain connections, channel morphology, channel structure, and flow regime (flood flows and low flows) (stream miles) (WR1)	60 miles	70 miles	55 miles	90 miles	80 miles
• Restoring riparian/wetland species composition (riparian acres) by increasing natural seedling establishment, planting, fencing, or modifying riparian management (riparian acres) (WR2)	150 acres	250 acres	150 acres	225 acres	210 acres

[5] All measures are proposed in priority watersheds.

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
• Increasing effective stream shade (WQ objective 1) by increasing amount and extent of woody riparian species and increasing age-class structure of terrestrial vegetation in MA 4B (stream miles) (WR3)	250 miles	500 miles	250 miles	375 miles	350 miles
• Increasing extent and vegetative species diversity of off-channel and isolated wetlands by restoring hydrologic pathways, modifying existing water diversions, or fencing (number of sites) (WR4)	25 sites	35 sites	35 sites	40 sites	35 sites
• Increasing the number and extent of beaver-created wetlands (sites)	10 sites	20 sites	10 sites	12 sites	12 sites
Improve stream channel and aquatic habitat function by: • Improving riparian habitat conditions (riparian acres, WR1-3)	450 acres (annually)	1,000 acres (annually)	800 acres (annually)	675 acres (annually)	600 acres (annually)
• Restoring channel morphology to reflect natural conditions (miles)	40 miles	60 miles	40 miles	60 miles	50 miles
• Increasing habitat complexity through channel reconstruction, placement of large wood or other structures, habitat enhancement (miles)	75 miles	230 miles	75 miles	113 miles	100 miles
• Increasing aquatic habitat connectivity through culvert replacement (number of culverts)	60 culverts 90 stream miles	90 culverts 120 stream miles	60 culverts 90 stream miles	90 culverts 135 stream miles	80 culverts 120 stream miles

1.2 Species Diversity

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
In cooperation with state wildlife agencies, expand bull trout occurrence within 10 years into unoccupied suitable stream segments within its historic range.	1 segment	2 segments	0 segments	1 segment	1 segment
Increase the amount and quality of source habitat (open, OFSS in the dry upland forest potential vegetation group) for white-headed woodpecker (per decade).	8,000 acres	7,000 acres	19,000 acres	11,000 acres	9,000 acres
Increase the amount and quality of source habitat (open canopy dry/moist upland forest potential vegetation group) for western bluebird and Cassin's finch.	41,000 acres (bluebird)	22,000 acres (bluebird)	85,000 acres (bluebird) 25,000 acres (finch)	66,000 acres (bluebird) 12,000 acres (finch)	44,000 acres (bluebird) 3,000 acres (finch)
Maintain Rocky Mountain elk security cover on a percentage of the landscape within MA 4A.	36%	36%	32%	33%	35%
Restore stronghold watersheds connectivity for aquatic species.	6-10 subwatersheds or 120-200 stream miles	8-12 subwatersheds or 160-240 stream miles	5-8 subwatersheds or 100-160 stream miles	6-9 subwatersheds or 120-180 stream miles	6-9 subwatersheds or 120-180 stream miles
Develop and implement habitat management plans for Spalding's catchfly key conservation areas.	N/A	N/A	N/A	Alt. E: N/A Alts. E-Mod. and E-Mod. Dep.: Lower Imnaha, Crow Creek, and Clear Lake Ridge Key conservation areas	N/A

1.4 Disturbance Processes

1.4.1 Wildland Fire (planned and unplanned ignitions)

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Treat stands using silvicultural treatments and prescribed burning (planned ignition) to move towards Fire Regime Condition Class 1 and 2 in the dry and moist upland forest potential vegetation groups.	170,000 acres	155,000 acres	215,000 acres	Alt. E: 220,000 acres Alts. E-Mod. and E-Mod. Dep.: 180,000 acres	190,000 acres
Treat stands using silvicultural treatments and prescribed burning (planned ignition) to decrease the potential for high severity wildfire in the dry upland forest potential vegetation group.	110,000 acres	100,000 acres	140,000 acres	Alt. E: 140,000 acres Alts. E-Mod. and E-Mod. Dep.: N/A	120,000 acres
Manage wildfire (unplanned ignition) for resource benefits: modify species composition, stand density, structural stages, fire frequency, and fire severity to move Fire Regime Condition Class 2 and 3 to Fire Regime Condition Class 1 and 2.	N/A	78,000 acres	N/A	Alt. E: 64,000 acres Alts. E-Mod. and E-Mod. Dep.: 50,000 acres	76,000 acres

1.4.2 Insects and Disease

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Within the dry upland forest potential vegetation group, treat stands with moderate to high susceptibility ratings using silvicultural treatments and/or wildland fire to decrease insect and disease susceptibility to low or moderate.	135,000 acres	125,000 acres	170,000 acres	Alt. E: 170,000 acres Alts. E-Mod. and E-Mod. Dep.: 155,000 acres	150,000 acres
Within the moist upland forest potential vegetation group, treat stands with moderate to high susceptibility ratings using silvicultural treatments and/or wildland fire to decrease insect and disease susceptibility to low or moderate.	25,000 acres	23,000 acres	30,000 acres	35,000 acres	30,000 acres

1.5 Invasive Species

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Reduce current infestations of invasive plant species.	7,000 acres	7,000 acres	15,000 acres	7,000 acres	7,000 acres

1.6 Structural Stages

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Decrease mid-age multi-story forest (UR stage) in the dry and moist upland forest potential vegetation groups by continuing to manage towards a large diameter (old forest) condition.	135,000 acres	125,000 acres	170,000 acres	Alt. E: 170,000 acres Alts. E-Mod. and E-Mod. Dep.: 158,000 acres	150,000 acres
Increase OFSS (open canopy) in the dry upland forest potential vegetation group by converting OFMS to OFSS.	2,000 acres	0 acres	20,000 acres	Alt. E: 5,000 acres Alts. E-Mod. and E-Mod. Dep.: 10,000 acres	3,500 acres

1.7 Plant Species Composition

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Increase shade intolerant stands in the dry upland forest potential vegetation group.	135,000 acres	125,000 acres	170,000 acres	Alt. E: 170,000 acres Alts. E-Mod. and E-Mod. Dep.: 154,000 acres	150,000 acres
Manage rangeland vegetation to improve phases C and D to phase A or B.	NA	NA	NA	Alt. E: 10,000 acres Alts. E-Mod. and E-Mod. Dep.: 12,405 acres	10,000 acres

1.8 Stand Density

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Reduce the dry and moist upland forest potential vegetation groups that are in the closed stand density class.	170,000 acres	155,000 acres	215,000 acres	Alt. E: 220,000 acres Alts. E-Mod. and E-Mod. Dep.:74,000 acres	190,000 acres

1.10 Soil Quality

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Implement erosion control and stabilization measures on unstable hillslopes. Possible activities include road realignment and improving forest vegetation conditions.	200-400 acres	200-400 acres	300-500 acres	150-250 acres	200-400 acres
Restore soil function (also see objectives for 1.1 Watershed Function).	150-300 acres	150-300 acres	200-400 acres	75-150 acres	175-350 acres

1.11 Water Quality

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Improve water quality through implementation of water quality restoration plans.	8-10 watersheds 320-400 stream miles	12-14 watersheds 480-560 stream miles	4-6 watersheds 160-240 stream miles	5-7 watersheds 200-280 stream miles	5-7 watersheds 200-280 stream miles

2.3.1 Rocky Mountain Elk

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Increase instances of elk occupancy and use of NFS lands by: • moving towards vegetative desired conditions and objectives to promote a mosaic patchwork of hiding cover and forage; and • providing a continuum of effective elk security in strategic locations. See objectives for vegetation (1.1, 1.4-1.8, and 1.12). See objectives for 2.7.	N/A	N/A	N/A	Alt E: N/A Alts. E-Modified and E-Modified Departure Within 7 years of plan approval, improve elk security to within Desired Condition range (30-100%) throughout 50% of the priority subwatershed. Within 15 years of plan approval, improve elk security to within Desired Condition range (30-100%) throughout 100% of the priority subwatershed. Within the life of the plan, improve elk security to within Desired Condition range (30-100%) throughout 50% of General Forest MA – 4A	N/A

2.7 Roads and Trails Access

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Maintain the road system for safe and efficient travel and for the protection, management, and use of NFS lands. Where open motor vehicle route density exceeds desired conditions, implement route closures and/or decommissioning or consider designating routes for other uses (refer to 1.1 Watershed Function for road decommissioning/obliteration objectives).	Miles of road maintenance: 79 miles MLs 4/5 147 miles ML 3 218 miles ML 2 (annually)	Miles of road maintenance: 75 miles MLs 4/5 79 miles ML 3 50 miles ML 2 (annually)	Miles of road maintenance: 100 miles MLs 4/5 200 miles ML 3 400 miles ML 2 (annually)	Miles of road maintenance: 90 miles MLs 4/5 170 miles ML 3 150 miles ML 2 (annually)	Miles of road maintenance: 95 miles MLs 4/5 160 miles ML 3 218 miles ML 2 (annually)

3.3 Goods and Services

Objective Statements for the Wallowa-Whitman National Forest	Alternative B	Alternative C	Alternative D	Alternatives E, E-Modified & E-Modified Departure	Alternative F
Contribute to local economies by harvesting sawlogs and timber volume other than sawlogs (TSPQ annually).	57 MMBF	30 MMBF	104 MMBF	Alt E: 63 MMBF Alt. E-Mod.: 65 MMBF E-Mod. Dep.: 98 MMBF	41 MMBF
Contribute to local economies by providing forage for cattle and sheep.	77,500 AUMs (annually)	29,500 AUMs (annually)	84,500 AUMs (annually)	Alt. E: 80,500 AUMs (annually) Alt. E-Mod. & E-Mod. Dep.: 112,000 AUMs (annually)	80,500 AUMs (annually)

Table A-27. Malheur National Forest anticipated annual accomplishments for the plan revision alternatives (as related to objectives)

Activity	Unit of Measure	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Acres Suitable for Timber Production	acres	770,000	530,000	1,080,000	770,000	770,000
Predicted Harvest Level (TSPQ)	MMBF	31	16	87	56	37
ASQ	MMBF	55	34	88	55	55
Timber Harvest (includes the following two rows)						
Even-aged regeneration harvest	acres	1,500	800	3,300	2,900	1,800
Uneven-aged and intermediate harvest	acres	5,600	2,600	17,200	9,600	6,500
Total Timber Harvest	**acres**	**7,100**	**3,400**	**20,500**	**12,500**	**8,300**
Planting	acres	700	400	1,600	1,400	900
Precommercial thinning	acres	1,400	1,000	3,000	1,400	1,400
Prescribed burning (planned ignition) and mechanical treatment of fuels (within and outside harvest units)	acres	16,600	12,900	20,500	22,000	17,800
Suppress invasive plants	acres	1,500	1,500	3,000	1,500	1,500
Cattle and sheep grazing	AUMs	126,500	62,200	125,500	123,500	123,500

Table A-28. Umatilla National Forest anticipated annual accomplishments for the plan revision alternatives (as related to objectives)

Activity	Unit of Measure	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Acres Suitable for Timber Production	acres	420,000	260,000	610,000	420,000	420,000
Predicted Harvest Level (TSPQ)	MMBF	29	16	76	56	36
ASQ	MMBF	51	31	73	51	51
Timber Harvest (includes the following two rows)						
Even-aged regeneration harvest	acres	1,200	500	2,600	2,400	1,500
Uneven-aged and intermediate harvest	acres	4,000	1,800	13,000	8,200	4,900
Total Timber Harvest	**acres**	**5,200**	**2,300**	**15,600**	**10,600**	**6,400**
Planting	acres	600	200	1,300	1,200	700
Precommercial thinning	acres	1,600	1,500	3,200	1,600	1,600
Prescribed burning (planned ignition) and mechanical treatment of fuels (within and outside harvest units)	acres	19,100	12,300	16,000	20,600	16,400
Suppress invasive plants	acres	1,500	1,500	3,000	1,500	1,500
Cattle and sheep grazing	AUMs	35,600	4,200	35,800	35,800	35,800

Table A-29. Wallowa-Whitman National Forest anticipated annual accomplishments for the plan revision alternatives (as related to objectives)

Activity	Unit of Measure	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Acres Suitable for Timber Production	acres	530,000	310,000	770,000	530,000	530,000
Predicted Harvest Level (TSPQ)	MMBF	27	15	80	50	34
ASQ	MMBF	46	22	75	46	46
Timber Harvest (includes the following two rows)						
Even-aged regeneration harvest	acres	1,000	500	2,500	2,000	1,400
Uneven-aged and intermediate harvest	acres	3,550	1,550	13,750	7,350	4,650
Total Timber Harvest	**acres**	**4,550**	**2,050**	**16,250**	**9,350**	**6,050**
Planting	acres	500	200	1,200	1,000	700
Precommercial thinning	acres	2,600	1,700	5,200	2,600	2,600
Prescribed burning (planned ignition) and mechanical treatment of fuels (within and outside harvest units)	acres	15,050	12,550	17,000	19,850	16,550
Suppress invasive plants	acres	3,500	3,500	3,500	3,500	3,500
Cattle and sheep grazing	AUMs	109,000	29,500	84,500	80,500	80,500

Standards and Guidelines (Plan Revision Alternatives)

The vast majority of the standards and guidelines included in the proposed action published for the scoping period remain as part of alternative B, the modified proposed action. Changes and additions are noted in the following tables and are proposed to help emphasize the different ways that the plan revision alternatives respond to the purpose and need and to the significant issues.

Forestwide Standards and Guidelines

Standards and guidelines are organized by resource or management action and apply to all three National Forests, except where specifically noted in the table.

Table A-30. Comparison of forestwide standards and guidelines for the plan revision alternatives for each national forest

1.1 Watershed Functions

Standard or Guideline Designator	Alternative B	Alternatives C, D, E, and F	Alternatives E-Modified and E-Modified Departure
KW-1S	**Standard** There shall be no net increase in the mileage of Forest Roads in any key watershed unless the increase results in a reduction in road-related risk to watershed condition. Priority should be given to roads that pose the greatest relative ecological risks to riparian and aquatic ecosystems.	This alternative retains the Alternative B management direction.	**Standard**[6] In Key Watersheds or subwatersheds with the Endangered Species Act critical habitat for aquatic species or subwatersheds containing listed aquatic species that are functioning properly there shall be no net increase (1 mile of road-related risk reduction for every new mile of road construction), where they are functioning-at-risk, there shall be a net decrease (1.5 miles of road-related risk reduction for every new mile of road construction), and where they are impaired function, there shall be a net decrease (2.0 miles of road-related risk reduction for every new mile of road construction) in system roads that affect hydrologic function. Priority for road-related risk reduction shall be given to roads that pose the greatest relative ecological risks to riparian and aquatic ecosystems. Road-related risk reduction will occur prior to new road construction unless logistical restrictions require post-construction risk reduction. This standard shall apply to the affected subwatershed when new system road construction is proposed in that subwatershed, and shall not be offset by reductions in open-road densities in other subwatersheds.

[6] "Functioning properly", "functioning-at-risk", and "impaired function" for the roads and trails indicator of Watershed Condition Framework are defined in Watershed Condition Framework Technical Guide, USDA Forest Service, 2011b. Local inventory, assessment and monitoring data and information can be used to refine initial classifications made per the Framework.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E, and F	Alternatives E-Modified and E-Modified Departure
KW-2S	**Standard** Hydroelectric and other surface water development authorizations shall include requirements for in-stream flows and habitat conditions that maintain or restore native fish and other desired aquatic species populations, riparian dependent resources, favorable channel conditions, and aquatic connectivity.	This alternative retains the alternative B management direction.	**Standard** In Key Watersheds and subwatersheds with the Endangered Species Act critical habitat for aquatic species or subwatersheds containing listed aquatic species, hydroelectric and other surface water development authorizations shall include requirements for in-stream flows and habitat conditions that maintain or restore native fish and other desired aquatic species populations, riparian dependent resources, favorable channel conditions, and aquatic connectivity.
KW-3S	**Standard** New hydroelectric facilities and water developments shall not be located in a key watershed unless it can be demonstrated that there are minimal risks and/or no adverse effects to the fish and water resources for which the key watershed was established.	This alternative retains the alternative B management direction.	**Standard** In Key Watersheds and in subwatersheds with the Endangered Species Act critical habitat for aquatic species or subwatersheds containing listed aquatic species, new hydroelectric facilities and water developments shall not be located in a Key Watershed unless it can be demonstrated that there are minimal risks and/or no adverse effects to the fish and water resources for which the Key Watershed was established.

Standard or Guideline Designator	Alternative B	Alternative C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
WM-1S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Standard** When watershed function[7] desired conditions are being achieved and watersheds are functioning properly[8], projects shall maintain[9] those conditions. When watershed function desired conditions are not yet achieved or watersheds have impaired function or are functioning-at-risk and to the degree that project activities would contribute to those conditions, projects shall restore[10] or not retard[11] attainment of desired conditions. Short-term adverse effects[12] from project activities may occur when they support or do not diminish long-term recovery[13] of watershed function desired conditions and federally listed species. Exceptions to this standard include situations where Forest Service authorities are limited (Alaska National Interest Lands Conservation Act [ANILCA], 1872 Mining law, valid state water right, etc.). In those cases, project effects shall be minimized and not retard attainment of desired conditions to the extent possible within Forest Service authorities. Use ARCS Attachment 2 to assist in determining compliance with this standard.
WM-2S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Standard** All projects shall be implemented in accordance with Best Management Practices, as described in National and Regional Technical Guides.

[7] Per Revised Forest Plan Watershed Function desired conditions (watershed function, hydrologic, riparian, wetland, stream channel, groundwater dependent ecosystem, and aquatic habitat).
[8] The Watershed Condition Framework categories of terminology for "functioning properly", "functioning-at-risk", and impaired function are equivalent to the "functioning appropriately" "functioning-at-risk" and "functioning at unacceptable risk" categories within the matrix of pathways and indicators (USFWS 1998), and to the respectively equivalent to "properly functioning" or "at risk" or "not properly functioning" categories within the matrix of pathways and indicators used by NMFS (1996).
[9] See glossary in the ARCS (Appendix A) for definitions of "maintain" and "degrade."
[10] See glossary in the ARCS (Appendix A) for definitions of "restore."
[11] See glossary in the ARCS (Appendix A) for definitions of "retard attainment."
[12] See glossary in the ARCS (Appendix A) for definition of "short-term adverse effects."
[13] See glossary in the ARCS (Appendix A) for definition of "long-term recovery."

Standard or Guideline Designator	Alternative B	Alternative C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
RE-1G	**Guideline** Watershed restoration projects should be designed to maximize the use of natural ecological processes as a tool in meeting and maintaining restoration objectives.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Watershed restoration projects should be designed to utilize or emulate natural ecological processes to the extent practicable, for meeting and maintaining restoration objectives.
RE-2G	**Guideline** Watershed restoration projects should be designed to minimize the need for long-term maintenance.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative retains the alternative B management direction.
RE-3S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Standard** Except where Forest Service authorities are limited, mitigation or planned restoration shall not be used as a substitute for preventing long-term watershed or habitat degradation.
RE-4S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Guideline** Hydrologic connectivity and sediment delivery from roads and trails should be minimized. This includes roads inside and outside of riparian management areas.	**Standard** Hydrologic connectivity and sediment delivery from roads and trails shall be minimized. This includes roads, or road segments, whether inside and outside of riparian management areas, that deliver sediment to streams.

1.2 Species Diversity

Late Old Structure Habitat

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternative E-Modified and E-Modified Departure
WLD-HAB-1	**Guideline** Management activities that limit the ability of wildlife to disperse between patches of source habitat should be avoided; area and patch size of late old structure should be maintained or improved and road density within and between old forest patches should be maintained or reduced.	**Standard** Management activities that limit the ability of wildlife to disperse between patches of source habitat shall be avoided; area and patch size of late old structure shall be maintained and road density within and between old forest patches should be maintained or reduced.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.
WLD-HAB-2	**Guideline** The extent of existing late old structure stands within the moist and cold old forest types that are 300 acres or larger should not be reduced or fragmented.	**Standard** The extent of existing late old structure stands within the moist and cold old forest types that are 300 acres or larger shall not be reduced or fragmented.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.
WLD-HAB-3	**Guideline** Riparian corridors connecting moist and cold old forest types should not be reduced.	**Standard** Riparian corridors connecting moist and cold old forest types shall be improved.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.
WLD-HAB-4	This alternative has no corresponding standard or guideline.	**Standard** Cold and moist late old structure habitats 300 acres or greater and separated by less than 2 miles shall be connected by forested corridors 300 feet wide or wider with a 60 percent or greater canopy cover.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternative E-Modified and E-Modified Departure
WLD-HAB-5	This alternative has no corresponding standard or guideline.	**Standard** Manage for old age trees so as much old forest structure as possible is sustained over time across the landscape. Sustain a mosaic of vegetation densities (overstory and understory), age classes and species composition across the landscape.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.
SD-1G	**Guideline** To the extent practical, known cavity or nest trees should be preserved when conducting prescribed burning (planned ignition) activities, mechanical fuel treatments, and silvicultural treatments.	**Standard** Known cavity or nest trees shall be preserved when conducting prescribed burning (planned ignition) activities, mechanical fuel treatments, and silvicultural treatments.	This alternative retains the alternative B management direction.	**Guideline** To the extent practical, known cavity or nest trees should be preserved when conducting prescribed (planned ignition) burning activities, mechanical fuel treatments, and silvicultural treatments to protect the integrity of the nest site.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E, and F	Alternative E-Modified and E-Modified Departure
SD-3G	Where salvage logging occurs, all snags 21 inches d.b.h. and greater and 50 percent of the snags from 12 to 21 inches d.b.h. should be retained except for the removal of danger/hazard trees. Snags should be retained in patches.	This alternative has no corresponding standard or guideline.	These alternatives retain the alternative B .management direction	**Guideline** With the exception of the removal of danger/hazard trees or fuel treatments within the WUI, when a need to harvest or destroy snags is identified as part of a silvicultural treatment, current conditions should be evaluated relative to the desired conditions tables for each snag size class (see Sec. 1.15, Tables 15 & 16) and: • Treatments should be limited to the extent that they will not result in a desired size-density category becoming underrepresented relative to desired conditions. • If an area is determined to be currently underrepresented in one or more of the desired size-density categories, snags should be retained within treatment units in quantities that will contribute to the highest density levels that are currently underrepresented. • Areas containing very low levels (<1 per acre) of snags as a result of the treatment should not exceed 10 contiguous acres in the Dry Upland Forest potential vegetation group, or 5 contiguous acres within all other PVGs to assure a sufficient supply of habitat for snag-dependent wildlife species.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E, and F	Alternative E-Modified and E-Modified Departure
SD-4G(WLD-HAB-20)	**Guideline** Greater than 50 percent of post-fire source habitat should be retained and should not be salvage logged, except in the wildland urban interface. **Guideline** Salvage logging shall not occur within burned source habitat areas less than 100 acres, except for the removal of danger/hazard trees.	This alternative has no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Guideline** In addition to the requirements of guideline SD-3G, if a need for post-fire salvage harvesting is identified, current conditions should also be evaluated relative to the desired conditions table pertaining to post-fire habitat, (see Sec. 1.15, Table 17) and (see next items): • Post-fire salvage treatments should be limited to the extent that the desired potential vegetation group proportions for post-fire habitat are currently being exceeded. • Post-fire salvage should generally not occur following individual fire events of less than 100 acres, except within the WUI or where necessary for the removal of danger/hazard trees.
SD-6G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Management activities within one mile of a known active (during same calendar year that use is documented) wolf den and rendezvous sites should implement appropriate seasonal restrictions based on site specific consideration and potential activity effects, to reduce disturbance to denning wolves.
SD-7G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Do not authorize turnout of sick or injured livestock to reduce risk of attracting wolves.
SD-8G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Remove or otherwise dispose of livestock carcasses such that the carcass will not attract wolves. If, due to location of the carcass, this is not possible, develop other remedies.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E, and F	Alternative E-Modified and E-Modified Departure
SD—9G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Do not authorize salt or other livestock attractants near known active (during same calendar year that use is documented) wolf dens or rendezvous sites to minimize livestock use of these sites.

Special Habitats

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternative E-Modified and E-Modified Departure
WLD-HAB-6	**Standard** Activities that have potential to cause abandonment or destruction of known denning, nesting, or roosting sites of threatened, endangered, or sensitive species shall not be authorized or allowed within 1,200 feet of those sites.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.
WLD-HAB-7	This alternative has no corresponding standard or guideline.	**Standard** Nest disturbing management activities shall not occur within a radius of 1,320 feet from known active goshawk nests between April 1 and August 1.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.
WLD-HAB-8	This alternative has no corresponding standard or guideline.	**Standard** Establish northern goshawk dispersal post-fledgling family areas in appropriate habitat when current density does not attain a post-fledgling family area every two and one-half miles.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternative E-Modified and E-Modified Departure
WLD-HAB-9	**Guideline** Northern goshawk home range establishment: • Post-fledgling family areas will be approximately 600 acres in size. Post-fledgling family areas will include the nest sites and consist of the habitat most likely to be used by the fledglings during their early development. • Establish a minimum of three nest areas and three replacement nest areas per post-fledgling family area. The nest areas and replacement nest areas should be approximately 30 acres in size. A minimum total of 150 acres of nest areas should be identified within each post-fledgling family area. • Nest site selection will be based first on using active nest sites followed by the most recently used historical nest areas. When possible, all historical nest areas should be maintained. • Manage for nest replacement sites to attain sufficient quality and size to replace the three suitable nest sites.	This alternative retains the alternative B management direction.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.
WLD-HAB-11	This alternative has no corresponding standard or guideline.	**Standard** Manage for breeding areas that will support a minimum of 3 reproductive pairs of pileated woodpeckers per watershed.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternative E-Modified and E-Modified Departure
WLD-HAB-12	**Standard** Where mechanical treatment activities occur within dry or cool moist forest habitat, all snags 21 inches d.b.h. and greater and 50 percent of the snags from 12 to 21 inches d.b.h. shall be retained, except for the removal of danger/hazard trees. Snags shall be retained in patches.	This alternative retains the alternative B management direction.	This alternative has no corresponding standard or guideline.	These alternatives retain the alternative B management direction.
RME-1S	This alternative has no corresponding standard or guideline	This alternative has no corresponding standard or guideline	This alternative has no corresponding standard or guideline	**Standard** There shall be no net loss of elk security measured within watersheds (5th field HUC) through building of new motorized routes or re-opening of closed motorized routes for public travel.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternative E-Modified and E-Modified Departure
RME-2G	**Guideline** Motor vehicle use within elk winter range should not be authorized or allowed between December 1 and April 30.	**Standard** Motor vehicle use within elk winter range shall not be authorized or allowed between December 1 and April 30.	This alternative retains the alternative B management direction.	**Guideline** Motorized travel on system roads, trails and areas open to motorized vehicle use should not be authorized within elk winter range between December 1 and April 14. These dates may be modified by as much as, but not exceed two weeks (e.g., March 31st, April 30th) as appropriate in consultation with State wildlife agencies. Federal and state highways and major forest system roads (such as arterials) may be exempted from this guideline to provide reasonable public access. Authorized administrative use of forest system roads also may be exempted from this guideline. The intent is to minimize disturbance to elk while occupying winter range and encourage elk use of public land. Elk winter range maps in the Project Record should be used as the basis for identifying winter range for future projects.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternative E-Modified and E-Modified Departure
RME-3G	This alternative have no corresponding standard or guideline.	This alternative have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Encourage elk use of Forest Service lands. Management activities that fall within identified elk priority areas should increase security by a minimum of 15 percent, to reach 30 percent or greater at the subwatershed (6th Field HUC) scale. This guideline applies to projects that affect security and/or treat greater than 500 acres of forested vegetation (prescribed fire is exempt). The intent is to improve distribution of elk across all seasonal ranges on Forest Service lands by moving toward and/or within the desired condition range of 30-100 percent elk security. Project effect analyses should identify and consider elk security, elk forage/ nutrition, elk hiding cover, and elk habitat selection and distribution.

Sage-grouse

Standard or Guideline Designator	Alternatives B, C, and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
SD-5S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Standard** Any management activities that take place within greater sage-grouse habitat shall follow the specific plan direction (desired conditions, objectives, standards, and guidelines) identified in Appendix B- Sage Grouse Guidance for Malheur and Wallowa-Whitman National Forests. Appendix B contains general, special use authorization (non-recreation), land ownership adjustment, land withdrawal, wind and solar, habitat, livestock grazing, fire management, Wild horse and burro, roads/transportation, fluid mineral, coal, locatable mineral, non-energy leasable mineral, and mineral material direction for the Greater Sage-grouse. Appendix B contains considerations for compensatory mitigation for the greater sage-grouse.
WLD-HAB-14	This alternative has no corresponding standard or guideline.	**Guideline** In greater sage-grouse habitat, developing new roads, motor vehicle trails, and artificial water impoundments should be avoided. During the breeding season, seasonal closure of open motor vehicle routes within 2 miles of known leks (protected activity centers) should be considered.	See standard SD-5S above
WLD-HAB-15	This alternative has no corresponding standard or guideline.	**Guideline** Surface occupancy for mineral or fossil fuel exploration or extraction should not be authorized or allowed within 3 miles of occupied greater sage-grouse leks (protected activity centers).	See standard SD-5S above
WLD-HAB-16	This alternative has no corresponding standard or guideline.	**Guideline** Power lines, communication towers, meteorological towers, and other tall structures should not be constructed within 2 miles of greater sage-grouse leks (protected activity centers).	See standard SD-5S above

Standard or Guideline Designator	Alternatives B, C, and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
WLD-HAB-17	This alternative has no corresponding standard or guideline.	**Guideline** Construction of wind turbines should not be authorized or allowed within 3 miles of known greater sage-grouse leks (protected activity centers).	See standard SD-5S above
RNG-7	This alternative has no corresponding standard or guideline.	**Guideline** Grazing utilization within occupied greater sage-grouse habitats should not exceed 40 percent at any time during the grazing season and will be determined specifically for each greater sage-grouse habitat, i.e., grazing utilization measured as an average of the entire pasture or grazing unit will not be used to determine compliance with this guideline.	See standard SD-5S above
RNG-8	This alternative has no corresponding standard or guideline.	**Guideline** During greater sage-grouse breeding season, livestock turnout and trailing should avoid concentration on known greater sage-grouse leks (protected activity centers).	See standard SD-5S above

Bat Maternity and Roost Sites

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternatives E-Modified and E-Modified Departure
SD-2G	**Guideline** Bat maternity and roost sites should not be disturbed.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Known bat maternity and roost sites should not be disturbed to minimize disturbance to bats during critical times and to protect the integrity of the site.

Bighorn Sheep

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternatives E-Modified and E-Modified Departure
BHSM-1S	**Standard** Domestic sheep or goat grazing shall not be authorized or allowed on lands where effective separation from bighorn sheep cannot be reasonably maintained.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Domestic sheep or goat grazing, trailing of domestic sheep or goats, or the use of domestic goats or sheep for manipulation of vegetation (i.e., noxious weed control, fuels reduction) shall not be authorized where effective separation[14] from bighorn sheep cannot be reasonably maintained. Effective separation between bighorn sheep and domestic sheep and goats is determined with a site-specific analysis.
RNG-10	**Standard** The use of domestic goats or sheep for manipulation of vegetation (i.e., noxious weed control, fuels reduction) shall not be authorized or allowed within or adjacent to source habitat for bighorn sheep.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.
BHSM-2S	**Standard** The use of recreational pack goats shall not be authorized or allowed within or adjacent to source habitat for bighorn sheep.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** The use of pack goats shall not be authorized in occupied bighorn sheep habitat or where effective separation from bighorn sheep cannot be reasonably maintained.

[14] Effective separation should be determined on a site specific basis through a quantitative and qualitative analysis that includes the following considerations:

- bighorn sheep herd size and relevant population parameters;
- proximity of domestic sheep or goats to bighorn sheep;
- permeability of the area separating bighorn sheep from permitted domestic sheep or domestic goats; and
- management practices that contribute to maintaining effective separation between these species.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternatives E-Modified and E-Modified Departure
RNG-12	**Standard** An effective monitoring program shall be in place to detect presence of bighorn sheep in identified high-risk areas when authorized domestic sheep or goats are present on adjacent or nearby allotments.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.
RNG-13	**Guideline** Trailing of domestic sheep or goats should not be authorized or allowed within 7 miles of bighorn sheep home ranges.	**Standard** Trailing of domestic sheep or goats shall not be authorized or allowed within 15 miles of bighorn sheep home ranges.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.
RNG-14	**Standard** When effective monitoring has not been conducted for bighorn sheep presence, domestic sheep or goat grazing shall not be authorized.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.
BHSM-3S	**Standard** Permitted domestic sheep and goats shall be counted onto and off of the allotment by the permittee. A reasonable effort to account for the disposition of any missing sheep must be made by the permittee.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Permitted domestic sheep and goats shall be counted onto and off of the allotment by the permittee. A reasonable effort to account for the disposition of any missing domestic sheep or goats must be made by the livestock grazing permittee and reported back to the Forest Service within 24 hours.
RNG-16	**Standard** When permitted sheep are found to be missing, the Forest Service shall be notified within 24 hours.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E, and F	Alternatives E-Modified and E-Modified Departure
BHSM-4S	**Standard** Authorized domestic sheep or goats shall be individually marked in a manner that allows immediate identification of ownership at a distance during the grazing season at all times while on NFS lands.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Domestic sheep and goats shall be individually marked in a manner that allows field identification of ownership when on National Forest System lands.
RNG-18	**Standard** Implement emergency actions when bighorn sheep presence is detected within 7 miles of active domestic sheep or goat grazing or trailing. Actions to be taken shall ensure separation between bighorn sheep and domestic sheep or goats.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.
BHSM-5S	**Guideline** To maintain separation, when bighorn sheep are found within 7 miles of an active domestic sheep and goat allotment, implementation of emergency actions for domestic sheep and goat grazing could include: Reroute (move) domestic sheep or goats to a new routing path that will take them away from the likely bighorn movement; this may involve rerouting within the permitted allotment, movement to a different allotment, or, if the situation cannot otherwise be resolved, moving the permitted sheep off of the national forest until the situation can be resolved Inform the appropriate state agency of the bighorn sheep location	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** To maintain effective separation, when bighorn sheep presence is likely to result in association with domestic sheep or goats, the Forest Service shall: 1) notify the appropriate state agency; and 2) implement actions that minimize the risk of contact between bighorns and domestic sheep or goats. This may involve rerouting within the permitted allotment, movement to a different allotment, or, if the situation cannot otherwise be resolved, moving the sheep off the National Forest until the situation can be resolved.

Standard or Guideline Designator	Alternative B	Alternative C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
WLD-HAB-22	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Guideline** Following wildfires greater than 10 acres in greater sage-grouse habitat at high risk of annual grass invasions, seeding with an appropriate mixture should be accomplished to reduce the probability of cheatgrass establishment.	**See Standard SD-5S above**
Standard or Guideline Designator	**Alternative B**	**Alternative C**	**Alternatives D, E and F**	**Alternatives E-Modified and E-Modified Departure**
WLD-HAB-23	This alternative has no corresponding standard or guideline.	**Standard** Prior to potentially disturbing activities, potential bat sites shall be surveyed to determine presence or absence of bats with a high degree of confidence.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.
WLD-HAB-24	This alternative has no corresponding standard or guideline.	**Standard** At least one year of survey of the analysis area, including a half mile beyond the boundary prior to activities that modify habitat, shall be completed. Two years of survey shall be accomplished to verify questionable sightings, unconfirmed nest sites, etc., If nesting goshawks are found during the first year of inventory, a second year of inventory is not needed in that territory.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D	Alternatives E and F	Alternatives E-Modified, and E-Modified Departure
WLD-HAB-25	**Guideline** Where management activities occur within riparian habitat, the quantity, stature, and health of shrubs should not be reduced or degraded.	This alternative retains the alternative B management direction.	This alternative has no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	See management direction for MA 4B
WLD-HAB-26	**Guideline** Roads and trails should not be constructed within high elevation riparian areas.	**Standard** Roads and trails shall not be constructed within high elevation riparian areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	See management direction for MA 4B
WLD-HAB-27	**Guideline** Residual herbaceous vegetation within riparian areas should be maintained at a level adequate to prevent stream bank degradation.	**Standard** Residual herbaceous vegetation within riparian areas shall be maintained at a level adequate to prevent stream bank degradation.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	See management Direction for MA 4B
WLD-HAB-28	**Guideline** Vigor and areal extent of seed producing grasses and forbs should not be reduced.	This alternative retains the alternative B management direction.	This alternative has no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
WLD-HAB-29	This alternative has no corresponding standard or guideline.	**Guideline** Where management activities occur within source habitat, the amount of shrubs in the early-seral stages of forest communities should not be reduced.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.

1.3 Federally Listed and Sensitive Species

Spalding's catch-fly (*Silene spaldingii*)

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
RE-5S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Standard** Minimize adverse effects to federaly listed, proposed, and candidate species and their designated and proposed critical habitat in accordance with Forest Service authorities. Management activities shall not "retard recovery"[1] of listed, proposed, and candidate species and their designated and proposed critical habitat in the long-term in accordance with Forest Service authorities. Federally listed, proposed, and candidate species and their designated and proposed critical habitats shall be managed in accordance with their recovery or other conservation plans, in accordance with Forest Service authorities. 1) Retard recovery: management action effects that, individually or in combination with other management actions or natural disturbances, measurably slow the natural rate of recovery.
FLS-1G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Guideline** Management activities should avoid adverse impacts to wolverine and its habitat to maintain population viability and avoid a trend towards federal listing.
FLS-16S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Standard** Domestic sheep grazing shall not be authorized (during same calendar year that use is documented) in an allotment that contains a known active wolf den or rendezvous site unless a herder is with the sheep at all times and retrieves known strays within 24 hours.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FLS-15S Umatilla and Wallowa-Whitman National Forests	**Standard** Livestock grazing shall not be authorized or allowed during the *Silene spaldingii* active growth period (generally between May 15 and August 30) in pastures that exhibit low departure from the desired condition, unless the grazing management history demonstrates that livestock avoid *Silene spaldingii* occupied habitat.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Standard** Livestock grazing of occupied Spalding's catchfly (*Silene spaldingii*) habitat shall not be authorized between July 1 and September 30 (flowering-fruiting period).
(PL-TES-2) Umatilla and Wallowa-Whitman National Forests	**Standard** Livestock grazing shall not be authorized or allowed in pastures occupied by *Silene Spaldingii* that exhibit moderate or greater departure from desired condition.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.
FLS-2G	**Guideline** Domestic livestock grazing should not be authorized or allowed in the fens/bogs sensitive plant habitat groups.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	Livestock grazing should not be authorized in the peatlands sensitive plant habitat group to protect the fragile habitat from trampling.
FLS-3S	**Guideline** Maximum forage utilization of key species should not exceed 30 percent in occupied habitat of threatened, endangered, and sensitive plant species, except where an approved conservation strategy, conservation agreement, or recovery plan approves an alternate use level.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Standard** Maximum utilization of key forage species shall not exceed 30 percent in occupied habitat of threatened, endangered, proposed or candidate plant species, except where an approved conservation strategy, conservation agreement, or recovery plan recommends an alternate use level.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FLS-4G	Same as FLS-3S above	These alternatives have no corresponding standard or guideline.	Same as FLS-3S above	**Guideline** Maximum utilization of key forage species should not exceed 30 percent in occupied habitat of sensitive plant species, except where an approved conservation strategy or conservation agreement recommends an alternate use level.
FLS-5G	**Guideline** New water developments and salting should not be authorized or allowed within one-quarter mile of occupied habitat of threatened, endangered, or sensitive plant species.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Guideline** New water developments and salting should not be authorized within one-quarter mile of occupied habitat of threatened, endangered, candidate or sensitive plant species to reduce concentrated livestock use and its associated impacts (e.g., excessive trampling, soil compaction and herbivory).
FLS-6S	**Guideline** Timber harvest and associated vegetation activities should avoid the occupied habitat of threatened, endangered, and sensitive plant species (minimum 100 foot buffer), unless the silvicultural prescription will benefit the species or its habitat.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Standard** Timber harvest and associated vegetation management activities shall avoid adverse effects to the occupied habitat of threatened, endangered, proposed, candidate or sensitive plant species unless the silvicultural prescription would benefit the species or its habitat.
FLS-7G	**Guideline** Slash piles and other fuels should be managed to avoid the occupied habitat of threatened, endangered, and sensitive plant species (minimum 100 foot buffer).	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Guideline** Slash piles and other fuels should be managed to avoid the occupied habitat of threatened, endangered, proposed or candidate plant species unless the burn plan or prescription would benefit the species or its habitat.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FLS-8G	**Guideline** Wildland fire (planned and unplanned) suppression lines should not be constructed within occupied habitat of threatened, endangered, and sensitive plant species.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Guideline** Construct fire control lines to avoid the occupied habitat of threatened, endangered, proposed, candidate and sensitive plant species to minimize adverse effects and impacts to these categories of plant species except where needed to provide for the protection of human life and public safety.
FLS-9S	**Guideline** New road construction should be designed to avoid the occupied habitat of threatened, endangered, and sensitive plant species (minimum 25-foot buffer).	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Standard** Road maintenance and new road construction shall be designed to minimize adverse effects to the occupied habitat of threatened, endangered, proposed or candidate plant species.
FLS-10G	Same as above	Same as above	Same as above	**Guideline** New road construction should be designed to minimize adverse impacts to the occupied habitat of sensitive plant species, to avoid a trend towards federal listing.
FLS-11S	**Guideline** All new trail construction should be designed to avoid the occupied habitat of threatened, endangered, and sensitive plant species (minimum 25 foot buffer).	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Standard** Trail maintenance and new trail construction shall be designed to avoid adverse effects to the occupied habitat of threatened, endangered, and proposed plant species.
FLS-13G	Same as above	Same as above	Same as above	**Guideline** Trail maintenance and new trail construction should be designed to avoid adverse impacts to the occupied habitat of sensitive plant species to avoid a trend towards federal listing.
FLS-12S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Recreation areas (e.g., ski areas) and other recreational action shall minimize adverse impact to whitebark pine and its habitat.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FLS-14G	**Guideline** Mining operations should be authorized or allowed only if activities are planned to avoid threatened and endangered plant species. Sensitive plant species should be avoided to the greatest extent possible.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Guideline** Leasable Minerals: Consent to Mineral Leases should be given with stipulations to minimize adverse effects to threatened and endangered species. Active minerals leases should be mitigated to minimize impacts that exploration and production operations may have on threatened and endangered species. Where exploration or mineral production activities cannot avoid or minimize the effects of operations, utilize compensatory mitigation to enhance off-site habitats and to support no net loss or, if possible, a net benefit for threatened or endangered species. Locatable Minerals: Locatable mineral operations should be mitigated within the context of the USFS regulations at 36 CFR 228 to protect threatened and endangered plant species from the effects of exploration and mining activities.
LH-4G	**Guideline** Land exchanges should avoid the disposition of occupied habitat of threatened, endangered, and sensitive plant species.	These alternatives have no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Guideline** Land exchanges should avoid the disposition of occupied habitat of threatened, endangered, candidate, proposed, or sensitive species.

Wildland Fire[15]

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FIRE-1	**Standard** Safety shall be the top priority when conducting wildland fire (planned and unplanned) operations.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
FIRE-2	**Guideline** Minimum Impact Suppression Tactics (MIST) should be utilized in sensitive areas, such as designated wilderness areas, designated wild and scenic river corridors, research natural areas, botanical areas, riparian management areas, cultural and historic sites, developed recreation areas, special use permit areas that have structures, and historic and recreational trails. MIST techniques should also be used for post fire restoration activities.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
FIRE-3	**Guideline** Mechanical fireline should not be constructed in areas with greater than 35 percent slope or on highly erodible soils unless potential adverse effects can be mitigated.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
FIRE-4	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Greater sage-grouse habitat should be identified in fire management plans and should be given high priority for protection.	These alternatives have no corresponding standard or guideline.

[15] Standards and guidelines apply to all three National Forests.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FIRE-5	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Prescribed fire should not be authorized or allowed within greater sage-grouse habitat unless the pre-burn assessment documents minimal risk of invasion by cheat grass or other invasive weeds.	These alternatives have no corresponding standard or guideline.

1.5 Invasive Species

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
NOX-1	**Standard** See alternative A "Management Direction for Invasive Species."	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding management direction.
IS-1G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Avoid cross contamination between streams, reservoirs and lakes from pumps, suction and dipping devices or any other equipment. Avoid dumping water directly from one stream or lake into another. Disinfect water storage and conveyance equipment including sampling equipment, water tenders, pumps, engines and aircraft prior to use on Forest.
IS-2S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** An integrated pest management (IPM) approach, including Early Detection and Rapid Response, shall be used to manage pests, such insects, diseases, and invasive or unwanted plants and animals.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
IS-3G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Determine appropriate range of treatments necessary to meet objectives for invasive species and native pests, while minimizing negative effects of treatments. Methods including prevention, manual, cultural, mechanical, regionally approved chemicals and biological agents may be considered within all management areas.
IS-4G	**Standard** All activities shall be conducted to minimize or prevent the potential spread or establishment of invasive species.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** All activities should be planned and conducted to minimize or prevent the potential spread or establishment of invasive species.
IS-5S	**Standard** Materials used for construction or restoration projects on National Forest System lands shall be free of invasive species.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Materials (e.g., straw, mulch, gravel, rock, fill, or soil) used for construction or restoration projects on NFS lands shall be weed-free. If State certified straw and/or mulch is not available, individual Forests should require sources certified to be weed-free using the North American Weed Free Forage Program standards or a similar certification process.
IS-6S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Equipment used for actions conducted or authorized by written permit or contract by the USFS that will operate outside the limits of the road prism shall be weed and pest-free prior to entering NFS lands.
IS-7S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Pelletized or certified weed free feed shall be used on all NFS lands. If state certified weed free feed is not available, individual Forests should require feed certified to be weed-free using North American Weed Free Forage Program standards or a similar certification process.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
IS-8G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Restore or revegetate sites disturbed by management activities, including sites specifically treated for invasive plants, to prevent the introduction or spread of invasive species.
IS-9G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** To avoid or minimize exposure to pesticides, treatment areas should be posted to inform the public and forest workers of application dates and pesticides used.

1.9 Air Quality

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
AQ-1S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Planned (prescribed) burning shall be conducted in accordance with State smoke management plans in Oregon and Washington, as applicable.

1.10 Soil Quality

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
SQ-1S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Design project activity units to result in no more than 20% detrimental soil disturbance at project conclusion.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
SQ-2S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** After completion of management activities, the minimum effective ground cover within each activity unit shall be in place to prevent erosion from exceeding background erosion rates for each of four established erosion hazard classes: low, medium, high, or very high (see table below). Effective ground cover can include rocks, woody debris, vegetation, etc.
SQ-3S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Management actions shall be designed to avoid the potential for triggering landslides.
SQ-4G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Mechanical fireline should not be constructed in areas with greater than 35 percent slope or on highly erodible soils unless potential detrimental effects can be mitigated.

Required minimum percent of effective ground cover (EGC) in the first and second years after an activity for each erosion hazard class

Erosion Hazard Class	Required Minimum % Effective Ground Cover (EGC) 1st year following activity	Required Minimum % Effective Ground Cover (EGC) 2nd year following activity
Low (Very Slight)	20%-30%	30%-40%
Medium (Moderate)	31%-45%	41%-60%
High (Severe)	46%-60%	61%-75%
Very High (Very Severe)	61%-75%	76%-90%

1.14 Old Forest[16]

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
OF-1G	**Guideline** Management activities within or outside old forest stands should retain live old forest trees ≥ 21 inches d.b.h. Exceptions include: • Tree(s) need to be removed to favor hardwood species, such as aspen or cottonwood, or other special plant habitats • Late seral species, such as grand fir, are competing with large diameter early seral species, such as ponderosa pine • Tree(s) need to be removed to reduce danger/hazard trees along roads and in developed sites • A limited amount of old forest trees need to be removed where strategically critical to reinforce and improve effectiveness of fuel reduction in wildland-urban interfaces	**Standard** Management activities within and outside old forest stands shall retain live trees ≥ 21 inches d.b.h.	This alternative has no corresponding standard or guideline.	**Guideline** **Alternative E:** Management activities within and outside old forest stands should generally emphasize retaining live old trees of desirable species. For most species, old trees are generally considered to be greater than 150 years in age and may exhibit certain old tree characteristics. However, these old tree characteristics may vary by site and should be further developed on a project-specific basis. **Alternative F:** Management activities should retain live old trees greater than 150 years old, except in lodgepole pine cover types (retain trees greater than 120 years old).	See below

[16] Standards and guidelines apply to all three National Forests

Standard or Guideline Designator	Alternatives E-Modified and E-Modified Departure
OF-1G	**Guideline** Management activities should retain and generally emphasize recruitment of old[17] trees, large[18] trees and legacy[19] trees. Exceptions where individual old, large or legacy trees may be removed or destroyed include situations where: • Trees need to be removed to meet or maintain desired conditions for species composition on the landscape by removing shade tolerant species in favor of shade-intolerant species. (see Desired Conditions Sec. 1.7) • Trees need to be removed from high-density forest to meet or maintain desired conditions for low density stand conditions on the landscape where removal of smaller trees alone cannot achieve desired conditions. • Trees need to be removed to control or limit the spread of insect or disease infestation. • Trees need to be removed to reduce danger/hazard trees along roads or in developed sites. • Trees need to be removed where strategically critical to reinforce, facilitate, or improve effectiveness of fuel reduction in wildland-urban interfaces. Additional exception applies only to large trees that do not also meet the definition of old trees: • Trees need to be removed to favor aspen, cottonwood, whitebark pine or other special plant habitats. • Trees needed to be removed to form key pieces in complex instream large wood structures.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
OF-2	**Guideline** New motor vehicle routes should not be constructed within old forest stands.	**Standard** New motor vehicle routes shall not be constructed in old forest stands.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.

[17] For the purpose of this guideline, the definition for the terms are as follows: "Old" trees are live trees with distinct features indicating ages of generally ≥ 150 years (see guidelines outlined in Van Pelt 2008).

[18] "Large" trees are live grand fir over 30-inch diameter at breast height or live trees of any other species over 21 inches diameter at breast height.

[19] "Legacy" trees are old trees that have been spared during past harvest or have survived stand-replacing natural disturbances and are thus significantly older than the average trees in the general area. This distinguishes them from other 'residual' trees, which may also have been spared from harvest but are not always significantly older than the average trees in the area (Mazurek and Zielinski 2004; Franklin 1990). Legacy trees of particular value to wildlife include those that are also large, rough-boled with dead horizontal limbs, have witch's broom deformities, are hollow, have heart rot, pockets of decay, dead or broken tops, cavities and/or substantial wounds (Bull et. al. 1997).

2.1 Scenery[20]

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
SC-1G	**Guideline** Short-term reductions to existing scenic integrity levels should be authorized only when needed to achieve the long-term restoration or rehabilitation of scenic integrity and/or scenic stability.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Short-term reductions to existing scenic integrity levels should be authorized only when needed to achieve the long-term ecosystem restoration or to improve scenic integrity and/or scenic stability.

2.2 Recreation

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
REC-1G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Recreation-related project-level decisions and implementation activities should be consistent with mapped classes and setting descriptions in the recreation opportunity spectrum.

[20] Guideline applies to all three National Forests

2.4 Cultural Resources

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
CR-1S	**Guideline** Prehistoric, historic, and traditional cultural properties should be protected unless an exemption is specified in a programmatic agreement or a project specific mitigation plan is developed in consultation with the appropriate State Historic Preservation Officer.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Prehistoric, historic, and traditional cultural properties shall be protected unless an exemption is specified in a programmatic agreement or a project specific mitigation plan is developed in consultation with the appropriate State Historic Preservation Officer and affected Indian Tribe(s).

2.5 Roads and Trails Access[21]

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
RT-1S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Limit motorized vehicles to roads, trails, and areas that are designated for use in the Umatilla National Forest Motorized Access and Travel Management Plan. Temporary exceptions are authorized for those conducting official duties including firefighting, organized rescues, duties by special use permit or contract, and others listed in the Forest Motorized Access and Management Plan or having the district ranger's authorization.

[21]Applies to the Umatilla National Forest

2.7 Tribal Rights and Interest

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
TR-1S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** The Forests shall use consultation processes established with American Indian tribal governments to identify and manage areas and resources of tribal importance on Forest lands.
TR-2G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** The Forests should take into account project effects to culturally significant foods prior to tribal consultation efforts.

3.2 Land Ownership

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
LO-1G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Use stipulations for permits and leases to protect sensitive resources, and exclude leasable and common mineral and energy development from areas in which such use is incompatible with mineral or energy development.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
LO-2G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Landownership adjustments should emphasize the following objectives: a) acquisition to meet identified resource management needs, b) acquisition contributing to consolidation that reduces administrative problems and costs and further enhances public use, and c) conveyance of land better suited for non-Federal ownership.

3.3.1 Forest Products

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FP-3S	**Standard** Clearcutting, shelterwood, and other even-aged regeneration harvest methods shall be used only when an interdisciplinary team/line officer has determined that protection can be assured for resources, such as soil, watershed, fish, wildlife, recreation, aesthetics, and the regeneration of the timber resource. It shall also be determined as the optimal harvest method.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** As directed by the NFMA, clearcutting and other even-aged harvests may be used only when developed through interdisciplinary review that assesses the projects impacts through appropriate environmental documentation and a finding that the project is consistent with the multiple uses of the general area.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FP-1S	**Standard** Forest openings created by the application of even-aged regeneration harvest methods shall be limited to a maximum size of 40 acres. Exceptions are permitted on an individual basis after a 60-day public notice period and review by the regional forester. This maximum size opening limitation does not apply to areas harvested after large-scale disturbances resulting from wildfire, insects, disease, windthrow, or other catastrophic events.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** As directed by the National Forest Management Act, cut blocks, patches, strips or other forest openings created by the application of even-aged or two-aged regeneration harvest methods shall be limited to a maximum size of 40 acres. Where units larger than 40 acres are considered likely to produce a more desirable combination of net public benefits, harvest openings larger than 40 acres may be permitted on an individual timber sale basis after 60 days' public notice and review by the Regional Forester. This maximum size opening limitation does not apply to areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm.
FP-2S	**Standard** Cut blocks, patches, or strips created by the application of even-aged regeneration harvest methods shall be shaped and blended with the natural terrain.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** As directed by the NFMA, cut blocks, patches, or strips created by the application of even-aged or two-aged regeneration harvest methods shall be shaped and blended with the natural terrain.
FOR-4	**Standard** Areas that are harvested using even-aged regeneration harvest methods on lands identified as suitable for timber production shall be capable of being adequately restocked within five years of final harvest. Adequately restocked is based on national forest or regional stocking standards.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FOR-5	**Standard** Stands shall generally have reached the culmination of mean annual increment of growth as per NFMA sec.6 (m) prior to harvest. This does not preclude the use of thinning or other stand improvement measures or salvage or sanitation harvesting of timber stands that are substantially damaged by fire, windthrow, or other catastrophic events or that are in imminent danger of insect or disease outbreaks. Exceptions: after consideration of multiple uses, include other activities, such as cutting for experimental and research purposes, removing particular species of trees, improving wildlife habitat, range, or recreation resources.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	This alternative has no corresponding standard or guideline.
FOR-6	**Guideline** Silvicultural treatments should include provisions to avoid detrimental changes in water temperatures, blockages of watercourses, and deposits of sediment.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	See direction for soils, watershed, and MA 4B-Riparian Management Areas
FOR-7	**Guideline** Timber harvest projects should include provisions for the maintenance or restoration of soil and water resources, including protection for streams, stream banks, shorelines, lakes, wetlands, and other bodies of water.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	See direction for soils, watershed, and MA 4B-Riparian Management Areas

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
FP 4-S	**Guideline** Silvicultural treatments should be developed through interdisciplinary review that considers multiple use of the general area and ensures that the harvest systems used are not selected primarily because they give the greatest dollar return or the greatest unit output of timber.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** As directed by the NFMA, the harvesting systems chosen for a project shall not be selected primarily because they give the greatest dollar return or the greatest output of timber.
FOR-9	**Guideline** Timber harvest should not cause irreversible damage to soil, slope, or other watershed conditions.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	See direction for soils, watershed, and MA 4B-Riparian Management Areas
FP-6S	**Guideline** Timber harvest on lands not suitable for timber production should occur only to meet multiple-use purposes other than timber production.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Timber harvest on lands not suitable for timber production shall occur only to meet desired conditions other than timber production.
FP-5S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Standard** As directed by the NFMA, clearcutting shall be used only where it is determined to be the optimum method for meeting desired conditions.
FP-7G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	**Guideline** The silvicultural systems utilized to manage forest vegetation should be consistent with those shown in the table below by forest vegetation type. All intermediate silvicultural tending treatments including but not limited to commercial and pre-commercial thinning, improvement cuttings, sanitation/salvage, prescribed fire, tree planting, pruning, site preparation or mechanical fuel reduction may be incorporated into these systems if use is consistent with other plan components.

Appropriate silvicultural system

Forest Vegetation Group or Cover Type	Even-Aged	Two-Aged [1]	Uneven-Aged
Cold upland forest	Clearcutting; Overstory Removal; Clearcutting-Salvage; Seed Tree; Shelterwood	Clearcutting; Overstory Removal w/Reserves; Seed Tree w/Reserves; Shelterwood w/Reserves	Single Tree Selection; Group Selection
Moist upland forest	Clearcutting; Overstory Removal; Clearcutting-Salvage; Seed Tree; Shelterwood	Clearcutting; Overstory Removal w/Reserves; Seed Tree w/Reserves; Shelterwood w/Reserves	Single Tree Selection; Group Selection
Dry upland forest	Overstory Removal; Clearcutting-Salvage; Seed Tree; Shelterwood	Overstory Removal w/Reserves; Seed Tree w/Reserves; Shelterwood w/Reserves	Single Tree Selection; Group Selection

1. Cuts in two-aged systems are a form of even-aged management and must comply with NFMA limitations for even-aged regeneration harvests.

3.3.2 Livestock Grazing[22]

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
LG-1G	**Guideline** Grazing after wildland fire (planned and unplanned) should be managed so as not to cause a trend away from the key species desired condition. This may include growing season deferment for one or more years following wildland fire.	**Standard** Grazing after wildland fire shall be deferred until vegetation recovers to a condition where grazing will not cause the percent composition of native species to be reduced (cause a downward trend in key species). This generally will be a minimum of 5 years, but could be up to 10 years depending on the extent and severity of the fire and other factors.	This alternative has no corresponding standard or guideline.	These alternatives retain the alternative B management direction.	**Guideline** Grazing after fire (planned and unplanned ignitions) should be managed so as not to cause a trend away from the native or desired non-native species desired condition. This may include deferment for one or more growing seasons following unplanned fire, which will be defined at the project level when restoration needs are assessed.
RNG-2	**Guideline** New fences should be designed to accommodate wildlife movement.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** This alternative retains the alternative B management direction with the following addition: In greater sage-grouse habitat, fence construction within 1 mile of known leks (protected activity centers) and seasonal high use areas should not be authorized or allowed. Fence construction on the crest of low hills should not be authorized or allowed unless the fence is marked with anti-strike markers.	This alternative has no corresponding standard or guideline.

[22] Standards and guidelines apply to all three National Forests

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
LG-2S	**Guideline** All new water developments should provide for small mammal and bird escape.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** All new water developments shall provide for small mammal and bird escape.
LG-3G	**Guideline** In areas classified as less than fully capable or suitable, only limited grazing should be authorized or allowed only after the limitations of the site are considered in designing the site-specific allotment management plan.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** In areas classified as less than fully capable or suitable for grazing, only limited livestock use should be authorized after the limitations of the site are considered in designing the site-specific allotment management plan.
LG-5G	**Guideline** Upland shrub utilization should not exceed 45 percent as determined by any science-based method.	**Standard** Upland shrub utilization shall not exceed 25 percent as determined by any science-based method.	This alternative has no corresponding standard or guideline.	**Guideline** Upland shrub utilization should not exceed 40 percent as determined by any science-based method.	**Guideline** To maintain plant diversity and productivity, upland shrub utilization of annual leader growth should not exceed 40 percent as determined by a science-based method, to maintain shrub health and reproduction capability.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
LG-4G	Maximum percent utilization by management system. See table below.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	Upland Forage Utilization **Guideline**: Maximum percent utilization by management system. Utilization should be based on a point in time measurement. Utilization accounts for reduction in forage by wildfire and all use by permitted livestock, wildlife, insects, or recreational use. Utilization will be based on height-weight curves and/or ocular estimates or other approved measures. Utilization is based on key species. See table below.

LG-4G (RNG-5) Maximum percent utilization by management system. See MA 4B standards and guidelines for management direction for grazing within riparian management areas.

Key grass and forbs species maximum percent utilization within upland sites

	Maximum Percent Utilization							
	Alt. B Departure from Desired Condition (guideline)		Alt. C Departure from Desired Condition (standard)		Alt. D Departure from Desired Condition (guideline)		Alt. E, E-Modified, E-Modified Departure and F Departure from Desired Condition (guideline)	
Management System	**Low**	**Moderate or Greater**	**Low**	**Moderate or Greater**	**Low**	**Moderate or Greater**	**Low**	**Moderate or Greater**
Season long	50%	30%	30%	30%	45%	40%	35%	30%
Management systems that incorporate deferment, rest, rotation	55%	35%	30%	30%	50%	45%	40%	35%

Utilization should be based on a point in time measurement.
Utilization includes all use by permitted livestock, wildlife, insects, wildfire, or recreational use.
Utilization will be based on height-weight curves and/or ocular estimates or other approved measures.
Utilization is based on key species.
Low-moderate departure: phase A or B
Moderate or greater departure: phase C or D

3.3.3. Special Uses

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
SU-1G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Wind towers should be placed to avoid areas of High Scenic Integrity.
SU-2G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Wind towers should be placed to avoid areas where natural topography, such as ridgetops, saddles, or mountain passes, create preferred travel, foraging, or migration routes for migratory birds, raptors, or bats.
SU-3G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Any development of wind energy and associated infrastructure within the planning area will consider and mitigate negative impacts to wildlife.

3.3.4 Mineral, Energy, and Geological Resources

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
ME-1S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Roads for mineral operations shall not be constructed prior to approval of a plan of operations and shall be designed and located to provide adequate protection to surface resources, including but not limited to slope stability, surface erosion, and water quality.

Standard or Guideline Designator	Alternative B	Alternatives C and D	Alternatives E and F	Alternatives E-Modified and E-Modified Departure
ME-2S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** The collection of vertebrate fossils from National Forest System lands is prohibited, except by permit to authorized individuals.

Management Area Standards and Guidelines

The following standards and guidelines are organized by management area. Forestwide design criteria displayed in the previous tables apply to all management areas. Standards and guidelines are organized by resource or management action and apply to all three National Forests except as noted in the tables. The standard and guideline designator column includes the current designator along with the one used for the proposed action (G- or S-) where applicable to ease comparison. New or modified standards and guidelines are identified as such.

Alternative Comparison Tables

Table A-31. Comparison of management area specific standards and guidelines for the plan revision alternatives for each national forest

MA 1A Congressionally Designated Wilderness Areas

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-1S	**Standard** With the exception of permitted livestock, animals other than pack stock and pets (see glossary) shall not be authorized or allowed in wilderness areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Animals and pets, other than those that are permitted, shall not be authorized in wilderness areas.
MA1A-2S	**Standard** Wheeled vehicles, such as wagons and game carts, shall not be authorized or allowed within wilderness areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Wheeled vehicles, such as wagons and game carts, shall not be authorized within wilderness areas.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA 1A WIL-3	**Guideline** New proposals for outfitter and guide special use permits or recreation event permits should be approved only when the special use or event is consistent with wilderness area desired conditions and a need is identified by a Needs Assessment and Capacity Analysis.	**Standard** New proposals for outfitter and guide special use permits or recreation event permits shall be approved only when the special use or event is consistent with wilderness area desired conditions and a need is identified by a Needs Assessment and Capacity Analysis.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA1A-3G	**Guideline** Party sizes greater than 12 people and/or 18 head of stock should not be authorized or allowed within wilderness areas.	**Standard** Party sizes greater than 12 people and/or 18 head of stock shall not be authorized or allowed within wilderness areas.	These alternatives retain the alternative B management direction.	**Guideline** Party sizes greater than 12 people or with more than 18 head of stock should not be authorized within wilderness areas to maintain wilderness characteristics.
MA1A-4G	**Guideline** The hitching or tethering of a horse or other saddle or pack animal should not be authorized or allowed within 200 feet of lakes or within 100 feet of streams and posted wetlands within wilderness areas.	**Standard** The hitching or tethering of a horse or other saddle or pack animal shall not be authorized or allowed within 200 feet of lakes or within 100 feet of streams and posted wetlands within wilderness areas.	These alternatives retain the alternative B management direction.	**Guideline** The hitching or tethering of a horse or other saddle or pack animal should not be authorized within 200 feet of lakes or within 100 feet of streams and posted wetlands in wilderness areas to maintain wilderness characteristics.
MA1A-5S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Storing or abandoning personal property, equipment, and supplies for more than 72 hours in wilderness areas shall not be authorized.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-16S	**Standard** Hitching or tethering of horses or other saddle or pack animals to trees, except for loading or unloading, shall not be authorized or allowed at campsites within wilderness areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Hitching or tethering of horses or other saddle or pack animals to trees, except for loading or unloading, shall not be authorized at campsites within wilderness areas. (Applies only to the Wallowa-Whitman National Forest)

MA 1A Congressionally Designated Wilderness Areas within the Malheur National Forest

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA 1A MAL-WIL-1	**Standard** Storing or abandoning personal property, equipment, and supplies for more than 72 hours shall not be authorized or allowed in the Strawberry Mountain Wilderness Area.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	See Standard MA1A-5S above.
MA1A-6G	**Guideline** Camping and campfires should not be authorized or allowed within 200 feet of lakes, streams, or other camps within wilderness areas.	**Standard** Camping and campfires shall not be authorized or allowed within 200 feet of lakes, streams, or other camps within wilderness areas.	These alternatives retain the alternative B management direction.	**Guideline** Camping and campfires should not be authorized within 200 feet of lakes, streams, or other camps within wilderness areas in order to maintain wilderness characteristics.

MA 1A Congressionally Designated Wilderness Areas within the Umatilla National Forest

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-7G	**Guideline** Camping and campfires should not be authorized or allowed within 200 feet of lakes, streams, or other camps within wilderness areas.	**Standard** Camping and campfires shall not be authorized or allowed within 200 feet of lakes, streams, or other camps within wilderness areas.	These alternatives retain the alternative B management direction.	**Guideline** Camping and campfires should not be authorized within 200 feet of lakes, streams, or other camps within wilderness areas in order to maintain wilderness characteristics.

MA 1A Congressionally Designated Wilderness Areas within the Wallowa-Whitman National Forest

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-8S	**Standard** Eagle Cap Wilderness Area visitors shall not be authorized unless they obtain and possess an entry permit.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
MA1A-9S	**Standard** Campfires shall not be authorized or allowed within 100 feet of any lake or posted wetland in the Eagle Cap Wilderness Area.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Campfires shall not be authorized within 100 feet of any lake or posted wetland in the Eagle Cap Wilderness Area.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-10S	**Standard** Campfires shall not be authorized or allowed within one-quarter mile of the following lakes in the Eagle Cap Wilderness Area: Bear Lake (Bear Creek Area), Blue Lake, Chimney Lake, Dollar Lake, Eagle Lake, Frazier Lake, Little Frazier Lake, Glacier Lake, Hobo Lake, Ice Lake, Jewett Lake, Laverty Lake, Maxwell Lake, Mirror Lake, Moccasin Lake, Prospect Lake, Steamboat Lake, Sunshine Lake, Swamp Lake, Tombstone Lake, Traverse Lake, and Upper Lake.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Campfires shall not be authorized within one-quarter mile of the following lakes in the Eagle Cap Wilderness Area: Bear Lake (Bear Creek Area), Blue Lake, Chimney Lake, Dollar Lake, Eagle Lake, Frazier Lake, Little Frazier Lake, Glacier Lake, Hobo Lake, Ice Lake, Jewett Lake, Laverty Lake, Maxwell Lake, Mirror Lake, Moccasin Lake, Prospect Lake, Steamboat Lake, Sunshine Lake, Swamp Lake, Tombstone Lake, Traverse Lake, and Upper Lake.
MA1A-11S	**Standard** Grazing of horses and other saddle and pack animals shall not be authorized or allowed within 200 feet of any lake in the Eagle Cap Wilderness Area.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Grazing of horses and other saddle and pack animals shall not be authorized within 200 feet of any lake in the Eagle Cap Wilderness Area.
MA1A-12S	**Standard** Eagle Cap Wilderness Area visitors shall not be authorized or allowed to enter posted restoration sites.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Eagle Cap Wilderness Area visitors shall not be authorized to enter posted restoration sites.
MA1A-13S	**Standard** Storing or abandoning personal property, equipment, and supplies for more than 72 hours shall not be authorized or allowed in the Eagle Cap Wilderness Area.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Storing or abandoning personal property, equipment, and supplies for more than 72 hours shall not be authorized in the Eagle Cap Wilderness Area.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-14S	**Standard** Party sizes greater than 12 people and/or 18 head of stock shall not be authorized or allowed in the Eagle Cap Wilderness Area.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Party sizes greater than 12 people and more than 18 head of stock shall not be authorized in the Eagle Cap Wilderness Area.
MA1A-15S	**Standard** When camping, party sizes greater than 6 people and/or 9 head of stock shall not be authorized or allowed in the Lakes Basin Management Area of the Eagle Cap Wilderness Area.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** When camping, party sizes greater than 6 people and greater than 9 head of stock shall not be authorized in the Lakes Basin Management Area of the Eagle Cap Wilderness Area.

Wildland Fire Management Activities within MA 1A

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-17G	**Guideline** All firelines should be restored by actions such as scattering slash piles along and onto firelines, knocking down or burning all slash piles greater than 18 inches tall, pulling back and covering all sod with slash, and placing boulders, logs, and slash on firelines to discourage use and camouflage entrance points. Additionally, all firelines that are within 100 feet of intercepting trails, roads, or stream crossings should be restored by cutting stumps flush and close to the ground (height of 4 to 5 inches), covering tops with a layer of soil (1 to 2 inches), and chopping and roughening the ends of logs and stumps.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** To maintain wilderness characteristics, all firelines should be restored by actions such as scattering slash piles along and onto firelines, knocking down or burning all slash piles greater than 18 inches tall, pulling back and covering all sod with slash, and placing boulders, logs, and slash on firelines to discourage use and camouflage entrance points. Additionally, all firelines within 100 feet of intercepting trails, roads, or stream crossings should be restored by cutting stumps flush and close to the ground (height of 4 to 5 inches), covering tops with a layer of soil (1 to 2 inches), and chopping and roughening the ends of logs and stumps.

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
MA1A-18G	**Guideline** Waterbars should be constructed on fireline slopes that exceed 10 percent.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Waterbars should be constructed on fireline slopes that exceed 10 percent in order to maintain wilderness characteristics.
MA 1A WIL-FIRE-3	**Guideline** Garbage and trash should be removed.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA1A-19G	**Guideline** Camps should be restored by replacing logs and rocks, re-contouring terrain, scarifying soil, and scattering twigs, rocks, and dead branches to discourage use and camouflage entrance points.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Camps should be restored by replacing logs and rocks, recontouring terrain, scarifying soil, and scattering twigs, rocks, and dead branches to discourage use and camouflage entrance points to maintain wilderness characteristics.
MA1A-20G	**Guideline** Closed roads that were opened to provide access to wilderness areas should be closed after the use has concluded.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Closed roads that were opened to provide access to wilderness areas should be closed after the use has concluded to maintain wilderness characteristics.
MA1A-21G	**Guideline** Wilderness trails used as firelines should be returned to original condition after the use has concluded.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Wilderness trails used as firelines should be returned to original condition after the use has concluded in order to maintain wilderness characteristics.

MA 1B Preliminary Administratively Recommended Wilderness Areas and MA 1C Wilderness Study Areas

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA1B-1S	**Guideline** Existing and proposed uses that could compromise wilderness area eligibility prior to congressional designation should not be authorized.	**Standard** Existing and proposed uses that could compromise wilderness area eligibility prior to congressional designation shall not be authorized.	These alternatives retain the alternative B management direction.	**Standard** Proposed uses that could compromise wilderness area eligibility prior to congressional designation shall not be authorized.
MA1B-2G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Mechanized (bicycle) use and non-motorized travel may occur on existing trails in recommended wilderness areas.
MA1B-3G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Motorized equipment including chain saws and trail machines may be used for trail maintenance and reconstruction on existing trails within recommended wilderness areas.
MA1C-1G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Management activities should not reduce or impair the wilderness characteristics and qualities for which the area was designated

MA 2A Wild and Scenic Rivers (includes Designated, Eligible, and Suitable Rivers)

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2A-1G	**Guideline** New proposals for outfitting and guiding special use permits or recreation event permits should be approved only when the special use or event is consistent with outstandingly remarkable values, wild and scenic rivers desired conditions, and when a need is identified by a needs assessment and capacity analysis.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** New proposals for outfitting and guiding special use permits or recreation event permits should be approved only when the special use or event is consistent with Outstandingly Remarkable Values (ORVs), wild and scenic rivers desired conditions, and when a need is identified and capacity is available.
MA2A-2S	**Standard** Hitching or tethering of horses or other saddle or pack animals to trees, except for loading or unloading, shall not be authorized or allowed at campsites within wild and scenic river corridors.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Hitching or tethering of horses or other saddle or pack animals to trees, except for loading or unloading, shall not be authorized at campsites within wild and scenic river corridors.
MA 2A WSR-3	**Guideline** Hitching, tethering, hobbling, and confining of saddle and pack animals within wild and scenic river corridors should be authorized or allowed only in designated stock facilities or at hardened campsites.	**Standard** Hitching, tethering, hobbling, and confining of saddle and pack animals within wild and scenic river corridors shall be authorized or allowed only in designated stock facilities or at hardened campsites.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA 2A WSR-4	**Guideline** New designated routes and trails should not be constructed within riparian management areas unless no other feasible alternative exists.	**Standard** New designated routes and trails shall not be constructed within riparian management areas.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA 2A WSR-5	**Guideline** Recreation livestock should be allowed or authorized only in designated areas.	**Standard** Recreation livestock shall be allowed or authorized only in designated areas.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA 2A WSR-6	**Guideline** Timber harvest roads should not be constructed within wild and scenic river corridors.	**Standard** Timber harvest roads shall not be constructed within wild and scenic river corridors	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA 2A WSR-7	**Guideline** Firewood collection (except for use at onsite campfires) should be allowed only at designated sites within wild and scenic river corridors, preferably not within riparian management areas.	**Standard** Firewood collection (except for use at onsite campfires) shall be allowed only at designated sites within wild and scenic river corridors, outside riparian management areas.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA2A-3S	**Guideline** The construction of roads and river crossings that are visible from the river corridor of wild and scenic sections should not be authorized or allowed except when necessary to meet recreation purposes.	**Standard** The construction of roads and river crossings that are visible from the river corridor of wild and scenic sections shall not be authorized or allowed except when necessary to meet recreation purposes.	These alternatives retain the alternative B management direction.	**Standard** New roads and motorized trails shall not be authorized within wild classifications of Wild and Scenic River Management allocations.
MA2A-4S	**Standard** Hazard trees shall be felled and left where they fall or moved to a desirable location within the wild and scenic river corridor.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Hazard trees felled at trailheads or watercraft put-in/takeout locations within river segments classified as wild rivers will be left where they fall, or moved to an ecologically desirable location.
MA2A-5S	**Standard** Mining of common minerals shall not be authorized.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA 2A WSR-11	**Standard** Oil and gas leasing shall not be authorized or allowed within 1,320 feet of the high water mark in wild river corridors.	Oil and gas leasing shall not be authorized or allowed within wild river corridors.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.

MA 2A Wild and Scenic Rivers within the Malheur National Forest (includes Designated, Eligible, and Suitable Rivers)

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA 2A MAL-WSR-1	**Standard** Motor vehicle use shall not be authorized or allowed on trail 303 within the Malheur Wild and Scenic River corridor and on trail 381 with in the North Fork Malheur Wild and Scenic River corridor.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA 2A MAL-WSR-2	**Standard** Livestock grazing shall not be authorized between Crane Creek and the southern boundary of the Malheur National Forest between July 1 and September 15.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.

MA 2A Wild and Scenic Rivers within the Wallowa Whitman National Forest (includes Designated, Eligible, and Suitable Rivers)

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2A-6S	**Standard** Camping shall not be authorized or allowed in the Lostine River corridor except in campgrounds, at trailheads, and in designated campsites.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Camping shall not be authorized in the Lostine River corridor except in campgrounds, at trailheads, and in designated campsites.

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2A-7S	**Standard** With the exception of trailheads and other designated areas, hitching, tethering, hobbling, and confining of saddle and pack animals shall not be authorized or allowed within the Lostine River corridor.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** With the exception of trailheads and other designated areas, hitching, tethering, hobbling, and confining of saddle and pack animals shall not be authorized within the Lostine River corridor.

MA 2B Research Natural Areas

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2B-1S	**Standard** Management activities that directly or indirectly modify the integrity of the ecological processes shall not be authorized or allowed.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	Management activities shall not be authorized that inhibit the purpose for the research natural area establishment
MA2B-2G	**Standard** Mineral exploration and development activities shall be managed to minimize impacts to research natural areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Mineral exploration and development activities should be managed to minimize impacts to research natural areas, consistent with valid existing rights.
MA2B-3S	**Standard** Removal of common mineral material shall not be authorized or allowed within research natural areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Standard** Removal of common mineral material shall not be authorized within research natural areas.

MA 2C Botanical Areas

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2C-1G	**Guideline** Visitor activities should be managed to avoid degradation to botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
MA2C-2G	**Guideline** Interpretive facilities should not conflict with the overall purpose of establishing botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
MA2C-3G	**Guideline** Silvicultural treatments should be allowed only when designed to enhance the special features of botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Silvicultural treatments should not degrade the special features of botanical areas.
MA2C-4G	**Guideline** Firewood collection should not be authorized or allowed within botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** To prevent damage to special features, firewood collection should not be authorized within botanical areas
MA2C-5G	**Guideline** Mineral exploration and development activities should be managed to minimize impacts to botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
MA2C-6G	**Guideline** Removal of common mineral material should not be authorized or allowed within botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Removal of common mineral material should not be authorized within botanical areas unless doing so will not adversely modify special features

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2C-7G	**Guideline** Botanical areas should be managed as avoidance areas for utility corridors.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Utility corridors should not be authorized within botanical areas, unless doing so will not adversely modify special botanical features
MA 2C BOT-8	**Guideline** Planned fire should be used to maintain or enhance the vegetation condition for which the botanical area was established.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA2C-8G *MA 2C BOT-9*	**Guideline** Endemic (normal) levels of insects and disease disturbance should be allowed within botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	**Guideline** Artificial control of endemic (normal) levels of insects and disease should not be authorized within botanical areas, to retain natural processes and influences.
MA 2C BOT-10	**Guideline** Invasive species should be reduced or eradicated within botanical areas.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.

MA 2D Geological Areas

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2D-1G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Management activities should not reduce or impair the natural and ecological values and qualities for which the area was designated.

MA 2E Historical Areas

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2E-1G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Visitor activities should be managed to avoid degradation to historical areas, and interpretive facilities should not conflict with the overall purpose of designated historical areas.

MA 2F Scenic Byways and All American Roads

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2F-1G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Visual impacts from vegetation treatments, recreation uses, rangeland developments, and other structures should blend with the overall landscape character along scenic byways.
MA2F-2G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Signs, kiosks, and other exhibits should provide interpretive, education, and safety information along scenic byways and in adjacent recreation sites.

MA 2G Nationally Designated Trails

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2G-1S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** The Nez Perce National Historic Trail shall be managed consistently with the guidance in the Nez Perce National Historic Trail Comprehensive Management Plan (USDA Forest Service et al. 1990).
MA2G-2S	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** The Nez Perce National Historic Trail shall be managed as a non-motorized route for primitive hiking and horseback riding for trail segments that are not identified as auto tour routes.

MA 2H Nationally Designated Trails

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2H-1G	This alternative has no corresponding standard or guideline.	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Signs, kiosks, and other exhibits should provide interpretive, education, and safety information along scenic byways and in adjacent recreation sites.

MA 2I Starkey Experimental Forest and Range

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2I-6G	**Guideline** To protect valuable infrastructure and assure compatibility with research needs and objectives, natural, unplanned ignitions should be suppressed with a high level of management response. Suppression activities are coordinated with the Station director, research project leader, or designee.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** To protect valuable infrastructure and assure compatibility with research needs and objectives, unplanned ignitions should be suppressed with a high level of management response. Suppression activities are coordinated with the Station director, research project leader, or designee
MA2I-5G	**Guideline** Planned ignitions should occur when/where compatible with research needs or objectives.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** Planned ignitions should occur only when/where compatible with research needs or objectives.
MA2I-4S	**Standard** Special forest product collection and firewood cutting shall only be allowed when/where compatible with research objectives.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.
MA2I-1S	**Standard** Vehicle access shall only be allowed on designated routes, unless necessary to meet research needs or objectives.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.
MA2I-2S	**Standard** Starkey EFR shall be closed to public access from fall until spring to protect deer and elk from harassment and stress during winter, with specific dates established periodically as consistent with research objectives.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2I-3G	**Guideline** Existing old growth stands should be retained and additional stands that are the closest to old growth structure should be retained at a rate of 20 percent of the land area.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	These alternatives retain the alternative B management direction.
MA2I-7S	**Standard** Plans of operation for existing locatable mineral claims shall be reviewed and modified, to the extent practicable, to be compatible with existing or planned research.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Standard** Plans of operation for locatable, leasable, and saleable mineral operations shall be reviewed and modified, to the extent practicable, to be compatible with existing or planned research.

MA 2J Municipal Watersheds

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2J-1S	**Standard** All management activities shall be designed to protect water quality at the intake in public water supply watersheds.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	All management activities shall be designed to protect water quality at the intake in public water supply watersheds. Activities that could influence drinking water sources will be conducted consistent with State and federal water quality regulations.

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA2J-2S	**Standard** Fertilizers and chemicals shall only be used in emergency situations, subject to the terms of existing agreements between individual cities and the U.S. Department of Agriculture.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Standard** All fertilizers and chemicals shall only be used in emergency situations, consistent with existing agreements between individual cities and the U.S. Department of Agriculture.

MA 3A Backcountry (nonmotorized use)

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA3A-1S	**Standard** New road construction shall be limited to that required for designated special uses or required by law to provide access to non-Federal land or valid existing rights.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Standard** Backcountry management areas within Inventoried Roadless Areas shall be managed consistent with the guidance in the 2001 Roadless Area Conservation Rule (36 CFR 294) (USDA 2001).

MA 3B Backcountry (motorized use)

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA3B-1S	**Standard** Silvicultural treatments shall generally be limited to small diameter material and may take place only for the following reasons: To improve habitat for species with viability concerns, restore terrestrial or aquatic ecosystem composition and structural characteristics, or to maintain existing unique or important wildlife features or plant communities Appropriate administrative use When cutting, sale, or removal of timber is incidental to the implementation of another suitable management activity.	**Standard** Silvicultural treatments shall not be allowed.	This alternative retains the alternative B management direction.	This alternative has no corresponding standard or guideline.
MA 3A/B BACK-2	**Standard** New road construction shall be limited to that required for designated special uses or required by law to provide access to non-Federal land or valid existing rights.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Standard** Backcountry management areas within Inventoried Roadless Areas shall be managed consistent with the guidance in the 2001 Roadless Area Conservation Rule (36 CFR 294) (USDA 2001).

MA 4A General Forest

Standard or Guideline Designator	Alternative B	Alternative C	Alternative D, E and F	Alternatives E-Modified and E-Modified Departure
MA4A-1S	This alternative has no corresponding standard or guideline	This alternative has no corresponding standard or guideline	These alternatives have no corresponding standard or guideline.	**Standard** As directed by the National Forest Management Act, when trees are harvested from lands identified as suitable for timber production, the harvests shall be made in such a way as to reasonably assure that the technology and knowledge exists to adequately restock the lands within five years of final regeneration harvest. Research and experience shall be the basis for determining whether the harvest and regeneration practices planned can be expected to result in adequate restocking. The adequate level of restocking shall be prescribed in a site-specific silviculture prescription for a project, which will specify the minimum number, size, distribution and species composition of regeneration needed based on the objectives and desired conditions for the Plan Area and project.
MA4A-2G	This alternative has no corresponding standard or guideline	This alternative has no corresponding standard or guideline	These alternatives have no corresponding standard or guideline.	**Guideline** As directed by the NFMA, even-aged regeneration harvests of stands on lands suitable for timber production should not occur until the stands have generally reached or surpassed the culmination of the mean annual increment measured in cubic feet. This does not preclude the use of thinning or other intermediate stand improvement treatments or salvage/sanitation harvesting of timber stands that are substantially damaged by fire, windthrow, or other catastrophic event or that are in imminent danger of insect or disease outbreaks. Exceptions may be made after consideration of overall multiple uses other than timber production including: • Cutting related to research or experimental purposes, or • Removing particular species of trees, or • Improving wildlife habitat, range or recreation resources.

MA 4B Riparian Management Areas

General Management within Riparian Management Areas

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
RMA-1S	**Guideline** When riparian management areas are functioning properly, project activities should be designed to maintain those conditions. When riparian management areas are not properly functioning, project activities should be designed to improve those conditions. Project activities in riparian management areas should not result in long-term degradation to aquatic and riparian conditions at the watershed scale. Limited short term or site-scale effects from activities in riparian management areas may be acceptable when they support, or do not diminish, long-term benefits to aquatic and riparian resources.	These alternatives retain the alternative B management direction.	**Standard** Riparian management areas include portions of watersheds where aquatic and riparian-dependent resources receive primary management emphasis. When riparian management area desired conditions are functioning properly, projects shall protect or maintain those conditions. When riparian management area desired conditions are not yet achieved or riparian management areas have impaired function or are functioning-at-risk and to the degree that project activities would contribute to those conditions, projects or permitted activities shall restore or not retard attainment of desired conditions.[23] Short-term adverse effects from project activities may occur when they support long-term recovery of riparian management area desired conditions.[24] Exceptions to this standard include situations where Forest Service authorities are limited (Alaska National Interest Lands Conservation Act {ANILCA}, 1872 Mining law, valid state water right, etc.). In those cases, project effects shall be minimized and not retard attainment of desired conditions to the extent possible within Forest Service authorities. Use ARCS Attachment 2 (e.g. diagnostic indicators and RMA ecological process and function descriptions) to assist in determining compliance with this standard.
RMA-2S	**Standard** Herbicides, insecticides, pesticides and other toxicants, and other chemicals shall be applied only to maintain, protect, or enhance aquatic and riparian resources or to restore native plant communities.	These alternatives retain the alternative B management direction.	**Standard** Herbicides, insecticides, pesticides and other toxicants, and other chemicals shall be applied only to maintain, protect, or enhance aquatic and riparian resources or to restore native plant communities in a manner that does not harm aquatic or riparian resources.

[23] Per Watershed Condition Framework Technical Guide, USDA Forest Service (2011b), subsequent versions of this guide and/or other comparable methods. The Watershed Condition Class terminology for functioning properly, "functioning-at-risk", and impaired function are equivalent to "functioning appropriately" or ", "functioning-at-risk" and "functioning at unacceptable risk" functioning categories within the matrix of pathways and indicators (USFWS 1998, and respectively equivalent to "Properly Functioning" or "At Risk" or "Not Properly Functioning" categories within the matrix of pathways and indicators used by National Marine Fisheries Service (1996).
[24] The definitions and rationale for the terms maintain, restore, degrade, retard attainment, short-term, and long-term are included in Forest Plan standard WM-1S.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
RMA-3S	**Guideline** Generally, trees needed to maintain, protect, or enhance aquatic and riparian resources that are felled for safety should be felled and left on site.	These alternatives retain the alternative B management direction.	**Standard** Trees felled for safety shall be retained onsite unless in excess of what is needed to achieve aquatic and riparian desired conditions. If the desired quantity and size distribution of large wood has been met on site, the wood can be transported to other aquatic and riparian restoration projects.
RMA-4G	**Guideline** Water drafting sites should be located and managed to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows needed to maintain riparian resources, channel conditions, and fish habitat.	These alternatives retain the alternative B management direction.	**Guideline** Water drafting sites should be located and managed to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows needed to maintain riparian resources, channel conditions, and fish habitat. To prevent the spread of invasive species, water should not be discharged into other water bodies.
RMA-5S	**Standard** Pumps shall be screened at drafting sites to prevent entrainment of fish and shall have one-way valves to prevent back-flow into streams.	These alternatives retain the alternative B management direction.	**Standard** Pumps shall be screened at drafting sites to prevent entrainment of fish and shall have one-way valves to prevent back-flow into streams.
RMA-6G	**Guideline** Fish habitat and water quality should be protected when withdrawing water for administrative purposes.	These alternatives retain the alternative B management direction.	**Guideline** Fish habitat and water quality should be protected when withdrawing water for administrative purposes.
RMA-7S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Refueling shall occur with appropriate containment equipment and a spill response plan in place. Wherever possible, storage of petroleum products and refueling will occur outside of riparian management areas. The use of containment devices, absorbent pads, and a developed spill plan will help reduce the risk of fuel and petroleum products from getting into streams and other waterways if an accident were to occur. If refueling or storage of petroleum products is necessary within RMAs, these operations will be conducted no closer than 100 feet from waterways

Fuels Management and Wildland (Unplanned) Fire Activities within MA 4B

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
MA 4B RMA-FIRE-1	**Guideline** Disturbed areas, such as firelines, drop-points, camps, roads, and trails, should be restored by actions such as scattering slash piles, replacing logs and boulders, scarifying soils, recontouring terrain, and reseeding with native species.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
FM-11G	**Guideline** Chemicals and retardant should not be used for suppression and mop-up within riparian areas.	These alternatives retain the alternative B management direction.	**Guideline** Chemicals or retardant should not be used for suppression or mop-up within riparian areas.
FM-6G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Disturbed areas, such as firelines, drop-points, camps, roads, and trails, should be restored by actions such as scattering slash piles, replacing logs and boulders, scarifying soils, recontouring terrain, and reseeding with native species.
FM-7G	**Guideline** Pumping directly from a stream channel should be avoided if chemical products are to be injected directly into the system. When chemicals are used, pumping should be conducted from a fold-a-tank that is located outside the riparian area.	These alternatives retain the alternative B management direction.	**Guideline** Pumping directly from a stream channel should be avoided if chemical products are to be injected directly into the system. When chemicals are used, pumping should be conducted from a fold-a-tank that is located outside the riparian area.
FM-12S	**Guideline** Pumps and charged hoses should not be back flushed into live water.	These alternatives retain the alternative B management direction.	**Standard** Pumps and charged hoses shall not be back flushed into stream channels, wetlands, or surface water.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
FM-1G	**Guideline** Temporary firefighting facilities (e.g., incident bases, camps, helibases, staging areas, helispots, and other centers) for incident activities should be located outside riparian management areas. When no practical alternative exists, all appropriate measures to maintain, restore, or enhance aquatic and riparian dependent resources should be used. (See guideline MA4B RMA-FIRE-1).	These alternatives retain the alternative B management direction.	**Guideline** Locate temporary firefighting facilities (e.g., incident bases, camps, helibases, staging areas, helispots, and other centers) for incident activities outside RMAs. When no practical alternative exists, all appropriate measures to protect, maintain, restore, or enhance aquatic and riparian dependent resources should be used. If the only suitable location for such activities is within a RMA, use may be granted following review by a resource advisor and discussion with the agency administrator. The resource advisor will work with the incident management team to prescribe the location, use conditions, and rehabilitation requirements. Use an interdisciplinary team to predetermine suitable incident base and helibase locations.
MA 4B RMA-FIRE-6	**Guideline** Aerial application of chemical retardant, foam, or other firefighting chemicals and petroleum should be avoided within 300 feet of waterways.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.
MA 4B RMA-FIRE-7	**Guideline** Water drafting sites should be located and managed to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows needed to maintain riparian resources, channel conditions, and fish habitat.	These alternatives retain the alternative B management direction.	These alternatives have no corresponding standard or guideline.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
FM-3S	**Standard** Portable pump set-ups shall include containment provisions for fuel spills and fuel containers shall have appropriate containment provisions. Vehicles shall be parked in locations that avoid entry of spilled fuel into streams.	These alternatives retain the alternative B management direction.	**Standard** Portable pump set-ups shall include containment provisions for fuel spills and fuel containers shall have appropriate containment provisions. Vehicles shall be parked in locations that avoid entry of spilled fuel into streams. When drafting, pumps shall be screened at drafting sites to prevent entrainment of aquatic species, screen area shall be sized to prevent impingement on the screens, and shall have one-way valves to prevent back-flow into streams. Use National Marine Fisheries Service approved screening criteria where listed fish or critical habitat are present.
FM-4G	**Guideline** Generally, firelines should be located and configured to minimize sediment delivery, creation of new stream channels, and unauthorized roads and trails.	These alternatives retain the alternative B management direction.	**Guideline** Locate and configure firelines to minimize sedimentation to waterbodies, capture of overland and stream flows, and development of unauthorized roads and trails. Restore firelines following suppression or prescribed fire activities.
FM-5S	**Standard** To minimize soil damage when chipping fuels within riparian management areas, chip bed depths on dry soils shall be limited to 7.5 cm or less (Busse et al. 2005).	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
FM-8G	**Standard** Minimum Impact Suppression Tactics (NWCG 2006) techniques for wildfire suppression activities shall be used in riparian management areas.	These alternatives retain the alternative B management direction.	**Guideline** Minimum impact suppression tactics (MIST) should be utilized in sensitive areas, such as designated wilderness areas, designated wild and scenic river corridors, research natural areas, botanical areas, riparian management areas, cultural and historic sites, developed recreation areas, special use permit areas that have structures, and historic and recreational trails. MIST techniques should also be used for post fire restoration activities.
FM-9G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Prescribed burn direct ignition in RMAs should not be used unless site/project scale effects analysis demonstrates that it would not retard attaining aquatic and riparian desired conditions.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
FM-10S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Ensure prescribed burn projects contribute to and do not retard the attainment of the aquatic and riparian desired conditions.

Silviculture and Timber Management within MA 4B

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
TM-1S	**Guideline** Silvicultural treatments should occur in riparian management areas only as necessary to maintain, restore or enhance conditions that are needed to support aquatic and riparian dependent resources.	These alternatives retain the alternative B management direction.	**Standard** Silvicultural treatments shall occur in riparian management areas only as necessary to maintain, enhance or restore desired conditions for aquatic and riparian resources. When conducted, these activities shall avoid or minimize adverse effects to aquatic and riparian resources. Vegetation in riparian management areas shall not be subject to regularly scheduled timber harvest, because they are not part of the timber suitability landbase.
TM-2S	**Standard** Firewood collection shall not be authorized or allowed in the active floodplain or within primary source areas for large woody debris. Active floodplain is the area bordering a stream that is inundated by flows at a surface elevation defined by two-times the maximum bankfull depth (i.e., bankfull depth measured at thalweg).	These alternatives retain the alternative B management direction.	**Standard** Fuelwood cutting shall not be authorized in RMAs unless specifically designed to attain aquatic and riparian desired conditions.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
TM-3G	**Guideline** New landings, designated skid trails, staging or decking should not occur in riparian management areas, unless there are no reasonable alternatives, in which case they should: Be of minimum size Be located outside the active floodplain Minimize effects to large wood, bank integrity, temperature, and sediment levels	These alternatives retain the alternative B management direction.	**Guideline** Use of existing or construction of new landings, designated skid trails, staging, and decking should not occur in riparian management areas, unless they are associated with projects designed to improve riparian management areas conditions. These features should: • be of minimum size, • be located outside the active floodplain, and • avoid negative effects to large wood, bank integrity, temperature, and sediment levels.
TM-4G	**Guideline** Yarding activities should achieve full suspension over the active channel. Active channel is the bankfull width of flowing perennial or intermittent streams.	These alternatives retain the alternative B management direction.	**Guideline** Yarding activities should achieve full suspension over the active channel[25] unless other alternatives will have less damage to riparian areas and stream channels.
TM-5S	This alternative has no corresponding standard or guideline	These alternatives have no corresponding standard or guideline	**Standard** Silvicultural practices shall include provisions, as appropriate, to avoid detrimental changes in water temperatures, blockages of water courses; including protection for streams, stream banks, shorelines, lakes, wetlands, and other bodies of water, and deposits of sediment.
TM-6S	This alternative has no corresponding standard or guideline	These alternatives have no corresponding standard or guideline	**Standard** Silvicultural practices shall include provisions (e.g., BMPs) for the maintenance or restoration of soil resources.
TM-7S	This alternative has no corresponding standard or guideline	These alternatives have no corresponding standard or guideline	**Standard** Timber harvest on lands not suitable for timber production shall occur only to meet desired conditions for each management area other than timber production.

[25] Active channel is the bank full width of flowing perennial or intermittent streams.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
TM-8G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** In watersheds in which stream channels and aquatic habitats are in properly functioning condition, forest vegetation within RMAs should be managed to maintain or increase large wood recruitment and delivery to streams.
TM-9S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** In watersheds in which stream channels and aquatic habitats are not in properly functioning condition, and where instream wood frequency and volume are below reference conditions and/or site potential, manage forest vegetation within RMAs to maintain or increase large wood recruitment and delivery to streams.
TM-10S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** As directed by the National Forest Management Act, timber harvest shall only occur when a site-specific finding has determined that it will not cause irreversible damage to soil, slope, or other watershed conditions.

Range Management and Domestic Livestock Grazing within MA 4B

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
GM-1S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Manage livestock grazing to attain aquatic and riparian desired conditions. Where livestock grazing is found to prevent or retard attaining aquatic and riparian desired conditions, modify grazing practices (such as number of livestock, timing, and physical structures). If adjusting practices is not effective, remove livestock from that area using appropriate administrative authorities and procedures.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
GM-2S	**Standard** New livestock handling and/or management facilities shall be located outside riparian management areas, except for those that inherently must be located in a riparian management area and those needed for resource protection.	These alternatives retain the alternative B management direction.	**Standard** New livestock handling and/or management facilities shall be located outside riparian management areas unless they do not prevent or retard attaining aquatic and riparian desired conditions.
GM-3G	**Guideline** Table A-32 displays the maximum utilization guidelines for riparian management areas.	**Guideline** Table A-32 displays the maximum utilization guidelines for riparian management areas.	**Guideline** See text following Table A-32.

Table A-32. Maximum utilization[1] within riparian management areas – Alternatives B, C, D, E and F

Measure	Alt. B	Alt. C[2]	Alt. D	Alt. E[3]	Alt. F
Maximum percent utilization of woody vegetation (percent of mean annual vegetative production)	40%	25%	40%	25% within bull trout spawning and rearing reaches 40% for all other watercourses including anadromous fish reaches	25% in bull trout spawning and rearing habitat (all three National Forests) 35% in anadromous fish reaches (UMA and WAW) 40% outside bull trout spawning and rearing habitat (MAL) 40% outside anadromous fish reaches (UMA and WAW)
Maximum percent utilization of herbaceous vegetation(percent of mean annual vegetative production)	40%	10%	40%	25% within bull trout spawning and rearing reaches 40% for all other watercourses including anadromous fish reaches	25% in bull trout spawning and rearing habitat (all three National Forests) 35% in anadromous fish reaches (UMA and WAW) 40% outside bull trout spawning and rearing habitat (MAL) 40% outside anadromous fish reaches (UMA and WAW)

1. In addition, the minimum residual stubble height (applies at the greenline) for all alternatives is 4 to 6 inches. The maximum bank alteration for all alternatives is 20 percent.

2. For alternative C, this is a standard for maximum utilization within riparian management areas.

3. See next page for Alternatives E-Modified and E-Modified Departure

UMA = Umatilla; WAW = Wallowa-Whitman; MAL = Malheur

Alternatives E-Modified and E-Modified Departure - GM-3G Annual livestock use and disturbance indicators

Guideline GM-3G. The purpose of this guideline is to manage livestock grazing to help attain and maintain aquatic and riparian desired conditions over time. Specifically, it is intended to maintain or improve vegetative and stream conditions, help ensure the viability of aquatic species, provide important contributions to the recovery of federally listed species, and facilitate attainment of State water quality standards.

The annual livestock use and disturbance indicators described below should be applied to help achieve, over longer timeframes, conditions at site and watershed scales that enable attainment and maintenance of desired conditions. The values specified below are starting points for management. Only those indicators and numeric values that are appropriate to the site and necessary for maintaining or moving towards desired conditions should be applied.[26] Specific indicators and indicator values should be prescribed and adjusted, if needed, in a manner that reflects existing and desired conditions and the natural potential of the specific geo-climatic, hydrologic and vegetative setting in which they are being applied.[27] Indicators and indicator values should be adapted over time based on long-term monitoring and evaluation of conditions and trends. Alternative use and disturbance indicators and values, including those in current Endangered Species Act consultation documents or non-Endangered Species Act allotment management plans or allotment analysis decisions, may be used if they are based on best available science and monitoring data and meet the purpose of this guideline.

1. Where desired conditions for water quality, aquatic habitat, and riparian vegetation have been attained[28] and riparian vegetation is in late-seral condition,[29] protect or maintain those conditions by managing annual livestock grazing use and disturbance as follows: [30]

    - maintain a minimum of 4-inch residual stubble height [31] of key herbaceous species on the greenline;

[26] Not all indicators may apply to a particular site. For example, stubble height is a meaningful indicator for lower gradient streams where herbaceous vegetation plays an important role in stabilizing streambanks. It is generally less useful for steeper channels, where channel morphology is controlled by coarse substrates. Moreover, not all numeric values may apply to a particular site (e.g., sites with short graminoids).

[27] Indicator values for specific sites should be determined based on consideration of local conditions including, but not limited to, the degree of departure between existing and desired conditions, the current and desired rate of improvement, site sensitivity to grazing, grazing season, the presence of special status species (e.g., ESA-listed species, Regional Forester's sensitive species) that are sensitive to grazing, whether or not water quality standards and related requirements (e.g., TMDLs for impaired waters) are being met, and the site's importance in maintaining or attaining those standards and requirements. Consideration of these conditions is especially important in prescribing specific stubble height values within the 4-inch to 6-inch range and streambank alteration values within the 15-20% range.

[28] Assessment of conditions and trends should be based on best available information at a variety of spatial and temporal scales. Site-specific information is particularly important.

[29] Late seral conditions means the existing riparian vegetation community is similar to the potential natural community composition (per Winward 2000).

[30] Per PACFISH/INFISH Monitoring, Multiple Indicator Monitoring (BLM Technical Reference 1737-23) protocols or comparable methods for stubble height, streambank alteration, and use of woody species. Per Bureau of Land Management protocols (BLM/RS/ST-96/004+1730) or comparable methods for herbaceous utilization.

[31] Stubble height criteria apply at the end of the grazing period, when that period ends after the growing season. When the grazing period ends before the growing season does, stubble height criteria can be applied at the end of the grazing period or the end of the growing season.

- utilize no more than 30-45 percent of deep-rooted herbaceous vegetation in the active floodplain[32] and, as needed, in other critical portions of the riparian management area;
- limit streambank alteration[33] to no more than 20-25 percent; and
- limit use of woody species to no more than 30-40 percent of current year's leaders along streambanks and, as needed, in other critical portions of the riparian management area.

2. Where desired conditions for water quality, aquatic habitat, and/or riparian vegetation have not yet been attained, but conditions are moving towards those desired conditions,[28] enable continued recovery by managing annual livestock grazing use and disturbance as follows:
   - maintain a minimum of 4-inch to 6-inch residual stubble height of key herbaceous species on the greenline;[31]
   - follow the criteria for utilization of deep-rooted herbaceous vegetation, streambank alteration, and use of woody species described in number 1 above.
3. Where desired conditions for water quality, aquatic habitat, and/or riparian vegetation have not been attained and conditions are not moving towards those desired conditions[28], enable recovery by managing annual livestock grazing use and disturbance as follows:
   - maintain a minimum of 6-inch residual stubble height of key herbaceous species on the greenline;
   - utilize no more than 30-35 percent of deep-rooted herbaceous vegetation in the active floodplain and, as needed, in other critical portions of the riparian management area;
   - limit streambank alteration to no more than 15-20 percent;[27] and
   - limit use of woody species to no more than 20-30 percent of current year's leaders along streambanks and, as needed, in other critical portions of the riparian management area.

[32] Active floodplain is defined as the area bordering a stream inundated by flows at a surface elevation that is two times the maximum bankfull depth (measured at the thalweg).
[33] Streambank alteration criteria apply within 1-2 weeks of removal of livestock from each pasture.

Range Management and Domestic Livestock Grazing within MA 4B (continued)

Standard or Guideline Designator	Alternative B	Alternatives C, E and F	Alternative D	Alternatives E-Modified and E-Modified Departure
GM-4G	**Guideline** During allotment management planning, removing existing livestock handling or management facilities from riparian management areas should be considered.	These alternatives retain the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** During allotment management planning, existing livestock handling or management facilities that prevent or retard attaining aquatic and riparian desired conditions should be removed, as appropriate.
GM-5G	**Guideline** Livestock trailing, bedding, watering, loading, and other handling in riparian management areas should be minimized.	These alternatives retain the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** Livestock trailing, watering, loading, and other handling in riparian management areas should be avoided or minimized.
GM-6S	**Standard** Trampling of federally listed threatened or endangered fish redds by livestock shall be avoided.	These alternatives retain the alternative B management direction.	**Guideline** Trampling of federally listed threatened or endangered fish redds by livestock should be avoided.	**Standard** Livestock grazing shall be managed and implemented to avoid trampling federally listed threatened or endangered fish redds.

Roads Management within MA 4B

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
RF-1G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** New roads and trails should not be constructed within riparian management areas unless no other feasible alternative exists.
RF-2G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Guideline** Temporary roads, including stream crossings, in RMAs should be minimized. Temporary roads, if constructed, should be managed to protect and restore aquatic and riparian desired conditions.
RF-3S	**Standard** Side-casting (placement of unconsolidated earthen waste materials resulting from road construction or maintenance) in riparian management areas shall be avoided.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
RF-4S	**Standard** Fill material shall not be placed on organic debris in riparian management areas.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
RF-5S	**Standard** Disruption of natural hydrologic flow paths, including diversion of streamflow and interception of surface and subsurface flow shall be minimized or avoided when constructing or reconstructing roads or landings either inside or outside of riparian management areas.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
RF-6G	**Guideline** Wetlands and unstable areas should be avoided when reconstructing existing roads or constructing new roads and landings. Minimize impacts where avoidance is not practical.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
RF-7S	**Standard** New or replaced permanent stream crossings shall accommodate flows at least 20 percent greater than the 100-year flood event, including associated bedload and debris.	These alternatives retain the alternative B management direction.	**Standard** New or replaced permanent stream crossings shall be designed to allow for the 100-year flood and its bedload and debris. 100-year flood estimates will reflect the best available science regarding potential effects of climate change
RF-8S	**Standard** Where physically feasible, construction or reconstruction of stream crossings shall avoid diversion of streamflow out of the channel and down the road in the event of crossing failure.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
RF-9S	**Standard** In fish bearing streams, construction or reconstruction of stream crossings shall provide and maintain passage for all fish species and all life stages of fish.	These alternatives retain the alternative B management direction.	**Standard** Construction or reconstruction of stream crossings shall provide and maintain passage for all life stages of all native and desired non-native aquatic and riparian-dependent organisms. Crossing designs shall reflect the best available science regarding potential effects of climate change on peak flows and low flows.
MA 4B RMA-RD-8	**Guideline** Construction or reconstruction of stream crossings should allow passage for other riparian dependent species where connectivity has been identified as an issue.	These alternatives retain the alternative B management direction.	See RF-9S above.
RF-10G	**Guideline** Fish passage barriers should be retained where they serve to restrict access by undesirable nonnative species and are consistent with restoration of habitat for native species.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.

Standard or Guideline Designator	Alternative B	Alternatives C, D, E and F	Alternatives E-Modified and E-Modified Departure
RF-11G	**Guideline** Hydrologic connectivity and sediment delivery from roads should be minimized. This includes roads inside and outside of riparian management areas.	These alternatives retain the alternative B management direction.	**Guideline** Design roads to minimize delivery of water and sediment from roads to streams. Avoid or minimize disruption of hydrologic flow paths, including diversion of streamflow and interception of surface and subsurface flow when constructing, reconstructing, and maintenance of roads or landing.
RF-12G	**Guideline** Road drainage should be routed away from potentially unstable channels, fills, and hillslopes. This applies both inside and outside of riparian management areas.	These alternatives retain the alternative B management direction.	**Guideline** Road drainage should be routed away from potentially unstable channels, fills, and hillslopes to the extent practicable.
RF-13S	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	**Standard** Road maintenance and new road construction shall be designed to minimize adverse effects to threatened, endangered, proposed, or candidate aquatic species and their habitat.

Recreation Management within MA 4B[34]

Standard or Guideline Designator	Alternative B	Alternative C	Alternatives D, E and F	Alternatives E-Modified and E-Modified Departure
RM-1G MA 4B RMA-REC-1 G-126	**Guideline** Generally, placing new facilities or infrastructure within expected long-term channel migration zones should be avoided. Where activities, such as the placement or construction of road-stream crossings, boat ramps, docks, and interpretive trails, inherently must occur in riparian management areas, locate them to minimize impacts on riparian dependent resource conditions (e.g., within geologically stable areas, avoiding major spawning sites).	**Standard** Placing new facilities or infrastructure within expected long-term channel migration zones shall be avoided. Where activities, such as the placement or construction of road-stream crossings, boat ramps, docks, and interpretive trails, inherently must occur in riparian management areas, they shall be located to minimize impacts on riparian dependent resource conditions (e.g., within geologically stable areas, avoiding major spawning sites).	This alternative retains the alternative B management direction.	**Guideline** New facilities or infrastructure should not be placed within expected long-term channel migration zones if it has the potential to impact channel or floodplain function. If some facilities must occur in riparian management areas (e.g., road stream crossings, boat ramps, docks, and interpretive trails), locate and design them to minimize impacts on floodplains and other riparian dependent resource conditions (e.g., within geologically stable areas, avoiding major spawning sites)
RM-2G MA 4B RMA-REC-2 G-127	**Guideline** Removing or relocating existing recreation facilities that are causing unacceptable impacts in riparian management areas should be considered.	**Standard** Existing recreation facilities that are causing unacceptable impacts in riparian management areas shall be relocated.	This alternative retains the alternative B management direction.	**Guideline** Existing recreation facility components that are causing unacceptable impacts in riparian management areas should be removed or relocated. Site condition should be restored to improve riparian area function.

[34] Standards and guidelines apply to all three National Forests.

Minerals Management within MA 4B[35]

Standard or Guideline Designator	Alternative B	Alternative C and D	Alternatives, E and F	Alternatives E-Modified and E-Modified Departure
MM-1G	**Guideline** Adverse effects to aquatic and other riparian-dependent resources from mineral operations should be minimized or avoided. For operations in riparian management areas, ensure operators take all practicable measures to maintain, protect, and rehabilitate water quality and habitat for fish and wildlife and other riparian dependent resources that may be affected by the operations.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** For operations in RMAs, ensure operators take all practicable measures to maintain, protect, and rehabilitate water quality and habitat for fish and wildlife and other riparian dependent resources that may be affected by the operations. Ensure operations do not retard or prevent attaining aquatic and riparian desired conditions. Exceptions to this guideline include situations where Forest Service has limited discretional authorities. In those cases, project effects should be minimized and should not prevent or retard attaining aquatic and riparian desired conditions to the extent possible within those authorities.
MM-2G	**Guideline** Structures, support facilities, and roads should be located outside riparian management areas. Where no alternative to siting facilities in riparian management areas exists, locate them in a way to minimize adverse effects to aquatic and other riparian-dependent resources. Existing roads should be maintained to minimize damage to aquatic and riparian dependent resources.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** To the maximum extent possible locate and manage structures, support facilities, and roads outside riparian management areas. Where none exists, locate and manage them to minimize effects upon aquatic and riparian-dependent desired conditions. Existing roads should be maintained to minimize damage to aquatic and riparian dependent resources. When structures, support facilities, and roads are no longer required for mineral activities, they should be restored or reclaimed to achieve aquatic and riparian desired conditions.

[35] Standards and guidelines apply to all three National Forests.

Standard or Guideline Designator	Alternative B	Alternative C and D	Alternatives, E and F	Alternatives E-Modified and E-Modified Departure
MM-3S	**Standard** Mine waste facilities with the potential to generate hazardous material (per CERCLA) shall be located outside of riparian management areas. If no reasonable alternative to locating these facilities in riparian management areas exists, then locate and design the waste facilities using the best conventional techniques to ensure mass stability and prevent the release of acid or toxic materials.	These alternatives retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Standard** Mine waste with the potential to generate hazardous material (as defined by CERCLA) shall not be authorized within RMAs and/or areas where groundwater contamination is possible. The exception is temporary staging of waste during abandoned mine cleanup.
MM-4G	**Guideline** Where possible, the operating plans for existing activities should be adjusted to minimize adverse effects to aquatic and riparian dependent resources in the riparian management areas.	This alternative retains the alternative B management direction.	This alternative retains the alternative B management direction.	**Guideline** Mineral operations should minimize adverse effects to aquatic and riparian-dependent resources in RMAs. Require BMPs and other appropriate conservation measures to mitigate potential mine operation effects.

Lands Ownership (Hydropower) within MA 4B[36]

Standard or Guideline Designator	Alternative B	Alternative C, D, E, and F	Alternatives E-Modified and E-Modified Departure
MA 4B RMA-HYD-1	**Standard** Authorizations for all new and existing special uses, including, but not limited to water diversion or transmission facilities (e.g., pipelines and ditches), energy transmission lines, roads, hydroelectric, and other surface water development proposals, shall result in the re-establishment, restoration, or mitigation of habitat conditions and ecological processes identified as being essential for the maintenance or improvement of habitat conditions for fish, water and other riparian dependent species and resources. These processes include in-stream flow regimes, physical and biological connectivity, water quality, and integrity and complexity of riparian and aquatic habitat.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
MA 4B RMA-HYD-2	**Standard** New support facilities shall be located outside of riparian management areas. Support facilities include any facilities or improvements (e.g., workshops, housing, switchyards, staging areas, and transmission lines) not directly integral to the production of hydroelectric power or necessary for the implementation of prescribed protection, mitigation or enhancement measures.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.
MA 4B RMA-HYD-3	**Guideline** If existing support facilities are located within the riparian management areas, they should be operated and maintained to restore or enhance aquatic and riparian dependent resources. At time of permit re-issuance, consider removing support facilities, where practical.	These alternatives retain the alternative B management direction.	These alternatives retain the alternative B management direction.

MA 5 Developed Sites and Administrative Areas

Standard or Guideline Designator	Alternative B	Alternative C, D, E, and F	Alternatives E-Modified and E-Modified Departure
MA5-1G	This alternative has no corresponding standard or guideline.	These alternatives have no corresponding standard or guideline.	Facilities should be maintained and protected to support management operations.

NOTE: MA 3C Wildlife Corridor does not have specific standards or guidelines.

[36] Standards and guidelines apply to all three National Forests.

Monitoring and Evaluation Plan for the Plan Revision Alternatives

Monitoring includes testing assumptions, tracking changes, and measuring management effectiveness and progress toward achieving or maintaining the plan's desired conditions or objectives. Monitoring information should enable the Forest to determine if a change in plan components or other plan content applicable to the plan area may be needed, forming the basis for continual improvement and adaptive management. Monitoring also serves as a means to inform the management of resources on the plan area, through means such as testing relevant assumptions, tracking relevant changes, and measuring management effectiveness and progress toward achieving or maintaining the plan's desired conditions or objectives.

Monitoring and evaluation are separate, sequential activities required by the National Forest Management Act. Monitoring is the collection of data by observation or measurement. Evaluation is the analysis and interpretation of monitoring data. The results of monitoring and evaluation may lead to changes in forest plan management direction.

There are three types of monitoring: implementation, effectiveness, and validation. Implementation monitoring evaluates whether "we did what we said we would do." Effectiveness monitoring evaluates how well a particular practice helps achieve a project objective, such as the effectiveness of a standard or guideline. The purpose of validation monitoring is to test key assumptions and generally involves designed research.

Two monitoring approaches, using implementation and effectiveness-type monitoring actions, are used for monitoring the Plan area to determine whether the land management plan needs to be changed.

1. The plan monitoring program identifies the monitoring questions and associated indicators for monitoring the plan. The Plan monitoring program consists of a set of monitoring questions and associated indicators to evaluate whether plan components are effective and appropriate and whether management is effective in maintaining or achieving progress toward desired conditions and objectives for the plan area.
2. Broader-scale monitoring information is used to address relevant plan monitoring questions that are best answered at a larger geographic scale. The regional forester is responsible for developing a broader-scale monitoring strategy (FSH 1909.12 sec. 33) to answer and manage plan monitoring questions common to two or more plan areas in the Region. Broader-scale monitoring strategies may be comprised of questions and indicators or may also include a description of protocols, data management, responsibilities, and partnerships for the questions and indicators. An example of broad-scale monitoring may include the PACFISH INFISH Biological Opinion Effectiveness Monitoring program, which addresses the condition of aquatic and riparian communities within the range of steelhead and bull trout.

The Plan monitoring program will be coordinated and integrated with broader-scale monitoring strategies to ensure that monitoring is complementary and efficient, and that information is gathered at scales appropriate to the monitoring questions (36 CFR 219.12). Biennial monitoring evaluation reports will document whether a change to the plan or monitoring program is warranted based on new information, whether a new assessment may be needed, or whether there is no need for change at that time (36 CFR 219.12). The monitoring evaluation report will summarize plan monitoring results and will incorporate broad-scale monitoring information to answer the relevant monitoring and evaluation questions. The report is intended to inform adaptive management for the plan area. The monitoring evaluation report will be made available to the public.

To reduce duplicative text, the monitoring plan is not repeated here. Please refer to the monitoring plan in the revised forest plans, as appended to the draft Record of Decision.

Appendix B: Laws and Regulations Relevant to Forest Planning

There is a complex legal framework within which planning takes place for management actions proposed within National Forest System lands. The following list, while not comprehensive, will provide some guidance as to the laws, regulations, executive orders and other guiding direction applied to planning for multiple uses and a range of resource needs. Forest Service Manuals and Handbooks also provide more specific guidance. This list is intended to provide some context for the development of desired conditions, standards, guidelines, proposed management activities, and the decisionmaking process. A simple internet search of any law or regulation listed here can provide more information.

Laws

American Indian Religious Freedom Act of 1996

Antiquities Act of 1906

Archaeological and Historic Preservation Act of 1974

Archaeological Resources Protection Act of 1979

Architectural Barriers Act of 1968

Bald and Golden Eagle Protection Act of 1940

Civil Rights Act (Titles VI, VII, and IX)

Clean Air Act of 1970

Cooperative Forestry Assistance Act of 1978

Economy Act of 1932

Endangered Species Act of 1973

Federal Land Assistance, Management and Enhancement Act of 2009

Federal Land Policy and Management Act of 1976

Federal Lands Recreation Enhancement Act of 2004

Federal Noxious Weed Act of 1974

Forest and Rangeland Renewable Resources Planning Act of 1974

Forest Service Partnership Enhancement Act of 2006

Granger-Thye Act of 1950

Healthy Forests Restoration Act of 2003

Highway Safety Act of 1966

Land and Water Conservation Fund Act of 1965

Magnuson-Stevens Fishery Conservation and Management Act of 1976

Migratory Bird Treaty Act of 1918

Multiple-Use Sustained Yield Act of 1960

National Environmental Policy Act of 1969

National Forest Management Act of 1976

National Historic Preservation Act of 1966

National Trails System Act of 1968

Native American Graves Protection and Repatriation Act of 1990

Omnibus Oregon Wild and Scenic Rivers Act of 1988

Omnibus Parks and Public Lands Management Act of 1996

Organic Administration Act of 1897

Public Law 94-199 of 1975: To establish the Hells Canyon National Recreation Area in the States of Oregon and Idaho, and for other purposes.

Public Rangelands Improvement Act of 1978

Reciprocal Fire Protection Act of 1955

Rehabilitation Act of 1973

Religious Freedom Restoration Act of 1993

Rescission Act of 1995

Ski Area Recreational Opportunity Enhancement Act of 2011

Surface Transportation Assistance Act of 1978

Sustainable Fisheries Act of 1996

Sustained Yield Forest Management Act of 1944

Taylor Grazing Act of 1934

Term Permit Act of 1915

The Endangered American Wilderness Act of 1978

The Forest Resources Conservation and Shortage Relief Act of 1990

The Knutson-Vandenberg Act of 1930

The National Forest Roads and Trails Act of 1964

The Oregon Wilderness Act of 1984

The Safe Drinking Water Act of 1974

The Small Business Act of 1953

Tribal Forest Protection Act of 2004

Wild and Scenic Rivers Act of 1968

Wild Horses and Burros Act of 1971

Wilderness Act of 1964

Code of Federal Regulations (CFR)

36 CFR 60: National Register of Historic Places

36 CFR 217: Requesting Review of National Forest Plans and Project Planning

36 CFR 219 (1982) National Forest System Land and Resource Management Planning Rule

36 CFR 219 (2012) National Forest System Land Management Planning Rule

36 CFR 221 Timber Management Planning

36 CFR 222: Grazing and Livestock Use on the National Forest System

36 CFR 223: Sale and Disposal of National Forest System Timber, Special Forest Products, and Forest Botanical Products

36 CFR 261: Forest Service Prohibitions

36 CFR 293: Wilderness–Primitive Areas

36 CFR 294: Special Areas; Roadless Area Conservation

36 CFR 296: Protection of Archaeological Resources

36 CFR 800: Protection of Historic Properties

40 CFR 51: Regional Haze Regulations

43 CFR 7: Protection of Archaeological Resources

43 CFR 10: Native American Graves Protection and Repatriation Regulations

Executive Orders

Executive Order 11593: Protection and Enhancement of the Cultural Environment

Executive Order 11988: Floodplain Management

Executive Order 11990: Protection of Wetlands

Executive Order 12580: Superfund Implementation

Executive Order 12862: Setting Customer Service Standards

Executive Order 12866: Regulatory Planning and Review

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 13007: Indian Sacred Sites

Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds

Executive Order 13287: Preserve America

Executive Order 13443: Facilitation of Hunting Heritage and Wildlife Conservation

Executive Order 13751: Safeguarding the Nation from Impacts of Invasive Species

Treaties

Treaty of 1855 between the United States and The Confederated Tribes of the Cayuse, Umatilla and Walla Walla

Treaties of 1855 and 1863 between the United States and the Nez Perce Tribe

Treaty of 1868 between the United States and the Eastern Band of Shoshoni and Bannock

Other Regulations

USDA regulation 9500-004: Fish and Wildlife Policy

Appendix C: Responses to Comments on the Draft Environmental Impact Statement

The purpose of this appendix is to respond to comments received on the Draft Environmental Impact Statement. We received comments from 1,104 entities (individuals, organizations, agencies, governments, and Tribes). Using "content analysis" we followed a systematic process of reading, coding, and summarizing the comments that were submitted. This process ensured that every comment was read, analyzed, and considered. Each commenter was assigned a commenter code and each unique comment was numbered sequentially and paraphrased into a concern statement to focus on issues. Similar comments were grouped and combined into "concern statements." Therefore, while not every comment is listed in this appendix exactly as written by each respondent, each comment was considered individually. Concern statements were then sorted by topic and arranged alphabetically according to resource and topic. All comments received, and the content analysis used to review, code, and sort comments, are located in the planning record.

The interdisciplinary team prepared responses for each comment based on its merits, regardless of the source or whether expressed by many or by one. Responses to comments focus on the following as required by regulations 40 CFR 1503.4:

- modifying one or more of the alternatives as requested.
- developing and evaluating suggested alternatives.
- supplementing, improving, or modifying the analysis.
- making factual corrections.
- explaining why the comments do not warrant further agency response.

Letters from State, Federal, and local agencies, as well as those received from local Tribes are attached in their entirety in Volume 3 in the section "Involvement with Native American Tribes and Federal, State, and Local Agencies and Governments."

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Concern Statements and Responses

Access

Access: Airstrips

1. **Concern Statement:** The Forest Service should retain or increase existing airstrips and landing areas because aviation is a valid and low-impact means of access for recreation activities. Airstrips can provide access for people with disabilities, search and rescue or safety operations, emergency landing, and firefighting. Many airstrips have historical value.

   Response: In response to numerous comments on the draft revised Forest Plan and Environmental Impact Statement that expressed concerns regarding aviation use on the national forests, additional material was included in the plan recognizing the importance of aviation and backcountry airstrips as a recreational use and as administrative infrastructure on the Blue Mountains national forests. The Forest Service recognizes the importance of maintaining collaboration with recreational aviation users for supporting Forest Service airstrip programs including operation, rehabilitation, maintenance, and continued public use as outlined in the "Service-Wide Memorandum of Understanding Between the Recreational Aviation Foundation and the USDA Forest Service, WO" (2015).

   Additional language was added in Goal 2.2 (Recreation) under the background section, Goal 2.2.3 (Backcountry Recreation) under the desired condition, and under Management Area 5 (Developed Sites and Administrative Areas) under the subheading "Administrative Sites). Airstrips are considered as a component of the national forest transportation system and are generally assessed and analyzed through travel management planning processes.

Access: Designated Routes

2. **Concern Statement:** The Forest Service should eliminate the need to travel only on designated routes. The Forest Service should allow "cross country travel" to be more access friendly. User conflict and safety issues could occur as a larger percentage of people are directed into the same areas. The default position should be open roads rather than closed.

   Response: With the exception of wilderness areas, the 1990 Forest Plans for the Wallowa-Whitman and Malheur National Forests include little management direction to distinguish motor vehicle use allocations from nonmotorized use allocations; however, the Forest Plan for the Umatilla National Forest included detailed management direction related to motor vehicle use. Subsequent to the Umatilla National Forest 1990 Forest Plan decision, each ranger district on the Umatilla National Forest made access and travel management decisions leading to the production of a forestwide motor vehicle use map in compliance with the Travel Management Rule (36 CFR 212 Subpart B).

   In March 2015, direction was given by Jim Peña, the Pacific Northwest Regional Forester, that directs the Blue Mountains national forests to defer any additional work required under Subpart B of the Travel Management Rule until after the Blue Mountains Plan Revision is completed. In line with the Regional direction, the Wallowa-Whitman and Malheur National Forests have paused Subpart B analysis until the Forest Plan

Revision is complete. The National Forests completed Subpart A of Travel Management Planning in the latter part of 2015. All three National Forests will continue to address natural resource concerns and public access needs as part of ongoing project-level decisions and forest restoration efforts, and base these analyses on existing regulation and the guidance contained in the Forest Plans.

In response to public comments that expressed a desire to remove phrases such as "designated routes" and "no cross country travel" from the draft Forest Plans and Environmental Impact Statement, the documents were edited to remove the referenced language. Instead, the language was replaced with the acknowledgement that national forests are required to comply with existing Forest Service regulation, in this particular instance the regulations at 36 CFR 212 that implement the Forest Service's Travel Management Rule (2005). The acknowledgement responds to additional public comments that expressed a desire for the Forest Service to enforce compliance with regulations for off-highway vehicle use.

3. **Concern Statement:** The Forest Service should designate routes to control where and how people travel while accommodating the growing demand for public access to public lands. For example, designated routes could direct off-highway vehicle traffic around sensitive sites.

   Response: The Forest Service is required to follow all federal laws, regulations, and policies including those that may be enacted during the life of the revised Forest Plans. The revised Forest Plans acknowledge that national forests are required to comply with existing Forest Service regulation, in this particular instance the regulations at 36 CFR 212 that implement the Forest Service's Travel Management Rule (2005). This acknowledgement responds to public comments that expressed a desire for the Forest Service to enforce compliance with regulations for off-highway vehicle use.

Access: Emphasize Nonmotorized Access

4. **Concern Statement:** The Forest Service should increase backcountry nonmotorized vehicle areas, close roads to support the protection of habitat, and prohibit additional cross-country and over-the-snow vehicle travel.

   Response: Three primary management areas including designated wilderness (MA 1A), preliminary administrative recommended wilderness (MA 1B), and backcountry (nonmotorized use; MA 3A) comprise large areas that are nonmotorized year-round and offer recreation experiences that are primitive with high degrees of self-reliance. The Final Environmental Impact Statement allocated varying amounts (acres) to these management areas in different alternatives. The Forest Plans do not designate routes, trails, or areas open to motor vehicle uses, and similarly do not close routes to vehicle use. That will be done through the Travel Management process and subsequent site-specific analysis processes.

Access: Forest Management

5. **Concern Statement:** The Forest Service should maintain its roads to allow access to manage forests and fuels, suppress wildfire, manage emergencies, and support grazing, mining, and special uses. If necessary, roads should be closed but not decommissioned.

   Response: We agree that motorized access is an important component of forest management to meet multiple resource needs. We recognize that a sustainable

transportation system is vital for forest-related management objectives including vegetation management, wildfire responses, emergencies, and to support economic related objectives including grazing, mining, and special uses. The revised Forest Plans provide programmatic direction as to where motorized use may or may not be suitable. Additionally, desired conditions for motorized use are integrated to meet other resource needs, provide for user safety, and to comply with existing laws, regulation, and policy.

The desired condition for Goal 2.5 (Roads and Trials Access) states "Roads identified for long-term use, but not currently funded for adequate maintenance are put in a stored condition, where they remain on the system but are not actively used." The desired condition acknowledges that roads, if necessary, may be placed into "storage" rather than be decommissioned. The revised Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses, and similarly do not close routes to vehicle use. Forest transportation systems are considered through the travel management process and subsequent site-specific analysis processes.

Access: Forest Products

6. **Concern Statement:** The Forest Service should maintain access routes so local residents can gather low-cost firewood, berries, and mushrooms, and hunt and fish. Access to these forest products and access to traditionally used locations are important cultural resources for nourishment, income, survival, travel and enjoyment.

   Response: Access is analyzed in the Final Environmental Impact Statement and includes a range of alternatives that vary the areas (acres) rated suitable for either motorized or nonmotorized use, and rated for both summer and winter use. Additional indicators used in the analysis include road maintenance (see the Access Section in the Final Environmental Impact Statement). Objectives stated for Roads and Trails Access (Goal 2.5) reflect the activities and program outcomes necessary to achieve or maintain desired conditions and includes the miles of road maintenance expected during the first decade of plan implementation.

   The "Economic and Social Well-being" section in Volume 1 of the Final Environmental Impact Statement was enhanced to include both sense of place and access descriptions to recognize the importance of subsistence—and often times intergenerational—uses on the national forests. These sections of the Final Environmental Impact Statement further detail subsistence uses including access for firewood, hunting, gathering, recreating, and general travel.

Access: Increase ATV/OHV/OSV Access

7. **Concern Statement:** The Forest Service should consider increasing all-terrain vehicle/off-highway vehicle/over-the-snow vehicle opportunities by: 1) designating all routes as open for motorized recreational vehicle use; and 2) offering an adequate quantity and quality of beginning, intermediate, and advanced routes and trails, including: 20- to 60-mile loop trails, OHV 4x4 Class 2 trails, single-track trails, beginner loops near campsites and in minimal traffic areas, long-distance routes (for example 90-125 miles), interpretive mining heritage routes; side destination developments, and dual-use road inter-connections.

   Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. These designations are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212). Access is analyzed in the Final Environmental

Impact Statement and includes a range of alternatives that vary the areas (acres) rated suitable for either motorized or nonmotorized use, and rated for both summer and winter use. Subsequent analyses of projects under the Forest Plan will have site-specific data to show differences among project alternatives and their effects on motorized travel.

The revised Forest Plans do not make site-specific route decisions and do not intend to limit or reduce access. Where appropriate, motorized recreation opportunities may be maintained or expanded.

The specificity outlined in the concern for the quality and quantity of trails types, class of vehicle, and trail opportunities are similarly considered under separate travel management planning or project specific planning processes. These recreational elements are central in the Desired Condition for Roads and Trials Access (2.5) in the revised Forest Plans that recognize the need and public desire for diverse motorized recreational opportunities.

8. **Concern Statement:** The Forest Service should differentiate between ATV and motorcycle trails in order to recognize the different needs and impacts. Users on single-track trails should not be separated.

   Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. These designations are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212). Similarly, these specific designations for ATV or motorcycle trails is completed during travel management planning or project level planning processes. The Final Environmental Impact Statement does include a range of alternatives that vary the amount of area (acres) that are rated suitable for either motorized or nonmotorized use, and rated for both summer and winter use. These ratings will help inform future travel management planning and project-level analysis.

Access: Limit Motorized Use

9. **Concern Statement:** The Forest Service should preserve large areas for nonmotorized use to provide quiet natural spaces and limit impacts to the quality of hunting, camping, hiking, fishing, backcountry packing, and skiing opportunities.

   Response: Three primary management areas including designated wilderness (MA 1A), preliminary administrative recommended wilderness (MA 1B), and backcountry (nonmotorized use; MA 3A) comprise large areas that are nonmotorized year-round and offer recreation experiences that are primitive with high degrees of self-reliance. The Final Environmental Impact Statement allocated varying amounts (acres) to these management areas in different alternatives. Additional management areas that contribute to primitive recreation opportunities include wild and scenic rivers (MA 2A) and other special area designations. Combined, these areas provide quiet natural spaces that conserve large, predominately natural appearing landscapes with high scenic quality for current and future generations.

10. **Concern Statement:** The Forest Service should enforce compliance with regulations for OHV use to prevent environmental degradation.

    Response: The revised Forest Plans acknowledge that national forests are required to comply with existing Forest Service regulation, in this particular instance, the regulations at 36 CFR 212 that implement the Forest Service's Travel Management Rule (2005). The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. That will be done through the Travel Management process. Criteria for designating road, trails, and

areas on National Forest System lands for motor vehicle use are stated in 36 CFR 212.55, and direct the responsible official to consider the effects from such designations on natural and cultural resources. Likewise, off-highway vehicle enforcement is outlined in 36 CFR 261.13.

Access: Motorized Forest Access

11. **Concern Statement:** The Forest Service should not demonize motorized use and should recognize that motorized users also seek solitude. The Forest Service shouldn't try to regulate user conflict or change policy to manage such conflict because it doesn't exist. Motorized access could be maintained by developing new trails and making better use of nonmotorized trails.

    Response: The revised Forest Plans and Environmental Impact Statement did not intend to bias any specific use or group over another use or group. Rather, the Forest Service seeks a balance among many uses and groups as outlined by the Multiple Use Sustained Yield Act (Public Law 86-517) and other applicable statutes.

    We agree that motorized access is an important recreation use to meet the needs of many recreationists. However, a variety of resources is affected by motorized traffic. The revised Forest Plans seek a range of recreational opportunities while considering many other resource management needs and responsibilities combined with user safety. Changes to specific routes are not a forest plan decision but an outcome of a site-specific analysis process.

    We agree that technical advancement of snowmobiles, off-highway vehicles, and mountain bikes, along with an increase in the popularity of these activities, has resulted in more users accessing more areas than they have in the past.

    We also agree with research provided that the interest and desire to participate in off-highway vehicle recreation in the outdoors is increasing and that motorized recreation is expected to have a beneficial effect on health and fitness. These activities promote mental and physical health of the public.

    The revised Forest Plans do not attempt to regulate user conflict. The Forest Plans allocate management areas and provide suitability ratings for each management area for a range of activities. The mention of "user conflict" in either the revised Forest Plans or the Environmental Impact Statement refers to Executive Order 11644 that states: "It is the purpose of this order to establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands." The revised Forest Plans recognize this regulatory authority, and acknowledge it as a condition to consider in future travel management planning.

    In response to public comments requesting additional recreational opportunities, the forestwide Goal 2.6 (Roads and Trails Access) and Desired Condition was modified to recognize the opportunity to provide connectivity between Forest Service recreation sites, and to connect these sites with adjacent communities through pathways, trails, bike lanes, and waterways, and to provide loop-riding opportunities.

12. **Concern Statement:** The Forest Service should not perpetuate bias against OHV use, as compared to other uses. Analysis of impacts to wildlife, erosion and spread of invasive weeds should be from all sources (grazing, logging, wildfire, floods, for example) and not

just from OHVs. The Forest Service should provide data or describe how it determined that motorized use (especially OHVs) negatively impacts wildlife, vegetation and soils and that limiting motorized use would benefit these resources. Likewise, the Forest Service should provide sediment-related data to contrast historic sediments loads to current sediment loads.

Response: The revised Forest Plans and Environmental Impact Statement did not intend to bias any specific use or group over another use or group or resource. Rather, the Forest Service seeks a balance among many uses and groups and resources as outlined by the Multiple Use Sustained Yield Act (Public Law 86-517) and other applicable statutes.

We agree that motorized access is an important recreation use to meet the needs of many recreationists. However, a variety of resources is affected by motorized vehicle use and the national forest's transportation system. We do provide data and descriptions regarding off-highway vehicle use and resource considerations and effects in the respective resource analysis sections in the Final Environmental Impact Statement including soils, watershed function, aquatic species, terrestrial wildlife species, and nonnative invasive species. Future site-specific analysis conducted through the travel management process will consider resources affected by motorized use on the national forests, and the beneficial effects of the national forests' transportation system, and will include public involvement and participation.

Access: No Road or Access Restrictions

13. **Concern Statement:** The Forest Service should maintain current levels of access and not place any restrictions on access because access is important for a broad range of activities including hunting, fishing, cycling, camping, hiking, mining, mushroom picking, berry picking, firewood gathering, photography, bird watching, wildlife watching, skiing, snowshoeing, motorcycling, riding off-road vehicles, gold panning, and rock hounding. Also, old logging roads should be left open to the public for wood gathering.

    Response: We agree that access and dispersed use (including but not limited to camping, berry picking, firewood gathering, hunting, and fishing) are important uses on the Blue Mountains national forests. The Revised Forest Plans include plan components and suitability ratings that identify where motor vehicle use is either suitable or not suitable, and where road and trail construction is rated suitable or not suitable for each management area. These plan components and suitability ratings, along with the recently completed Travel Analysis Reports for Malheur, Umatilla, and Wallowa-Whitman National Forests, will help inform future project-level decisionmaking regarding the national forests' transportation system. The revised Forest Plans do not limit or reduce levels of access or propose site-specific changes to the forest transportation system. Other resource area considerations, including Rocky Mountain elk and watershed function, may also influence future forest transportation system use and distribution.

14. **Concern Statement:** The Forest Service should not limit access because it would hurt local businesses and social stability, impact those who access national forest lands for sustenance, and destroy trust in the Forest Service.

    Response: We recognize the importance of national forest access for its contribution to local economies and for providing access for sustenance-related activities. The "Economic and Social Well-being" section in Chapter 3 of the Final Environmental Impact Statement describes economic impact zones and the contributions provided by recreation-related activity on the Blue Mountains national forests. As stated in the FEIS,

"For all alternatives, the quantity of recreation visits to the national forests in not expected to vary from current use levels. The current supply of recreational opportunities is expected to exceed demand for the foreseeable future."

The revised Forest Plans do not make site-specific route decisions and do not intend to limit or reduce access. Where appropriate, motorized recreation opportunities may be maintained or expanded. The national forest transportation system may be used to access areas for hunting, berry picking, camping, pleasure driving, firewood removal, and to access the trail system for off-highway vehicle use, bicycle, hiking, and horseback use. These trails also provide access to the backcountry for hunting, fishing, camping, photography, and many more recreation and subsistence related activities. Changes to specific routes are not a forest plan decision but an outcome of a site-specific analysis process.

15. **Concern Statement:** The Forest Service should not limit access because it will disproportionately affect children, aging populations, wounded veterans, and people with disabilities.

    Response: We agree that motorized access is an important component of national forest management to meet the needs of many recreating publics, and the Forest Service strives to meet user needs and accessibility guidelines. The Forest Service Trail Accessibility Guidelines and the Forest Service Outdoor Recreation Accessibility Guidelines (Forest Service Manual 2300) provide administrate oversight in managing access and use.

    Under section 504 of the Rehabilitation Act of 1973, no person with a disability can be denied participation in a Federal program that is available to all other people solely because of his or her disability. In conformance with section 504, wheelchairs are welcome on all National Forest System lands that are open to foot travel and are specifically exempted from the definition of motor vehicle in 36 CFR 212.1 of the Travel Management Rule, even if they are battery powered.

    The revised Forest Plans do not limit or reduce levels of access or propose site-specific changes to the national forest transportation system, and reasonable restrictions on motor vehicle use, applied consistently to everyone, are not discriminatory. There is no requirement to allow people with disabilities to use off-highway vehicles or other motor vehicles on roads, trails, and areas that are closed to motor vehicle use.

16. **Concern Statement:** The Forest Service should not limit access because it would negatively impact the deep cultural and historic ties communities have to the forests.

    Response: The revised Forest Plans do not limit or reduce levels of access or propose site-specific changes to the national forest transportation system. The "Economic and Social Well-being" section in Volume 1 of the Final Environmental Impact Statement was enhanced to include a sense of place description to recognize the cultural and historic ties of local communities to the national forests. As stated in the FEIS, "Subsistence uses, or the ability to get materials for survival, from national forests contribute to how people connect with the land. People value subsistence opportunities on national forests and believe it contributes to their well-being. Therefore, they have positive attitudes towards open access to the forest land."

    The revised Forest Plans do not make site-specific route decisions and do not intend to limit or reduce access. Where appropriate, motorized recreation opportunities may be maintained or expanded.

17. **Concern Statement:** The Forest Service should not close roads. The forest plans should only identify issues of concern. Roads should only be closed if there is demonstrated site-specific impact that is greater than naturally-occurring events. Restrictions should be considered instead of closures. If a motorized route is closed, the plan should allow for a route of equal opportunity in a different location. In addition, the Forest Service should not close any specific forest roads, for example Government Mountain Road or the Mt. Howard access road or Forest Service road 5427.

    Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. These designations are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212). Access is analyzed in the Final Environmental Impact Statement and includes a range of alternatives that vary the amount of area (acres) that are rated suitable for either motorized or nonmotorized use, and rated for both summer and winter use. Subsequent analyses of projects under the Forest Plans will have site-specific data to show differences among project alternatives and their effects on motorized travel.

    Access that is authorized as part of a permitted use will not change under the revised Forest Plans. The status of Forest Service routes (collectively roads and trails) will not change under the revised Forest Plans, including access to Mt. Howard and any other specific location. The management area allocation for the Mt. Howard location is Management Area 5 (Developed Sites and Administrative Areas) and Management Area 3B (Backcountry—motorized use); both of these allocations are rated suitable for motor vehicle use.

Access: Private Lands and Other Ownerships

18. **Concern Statement:** The Forest Service should maintain access to private lands and cabins for continuance of existing and historic and existing uses, including National Forest System Road 2036 and property at 3N-Range 36 section 36.

    Response: The Forest Service is required to follow all federal laws, regulations, and policies including those that may be enacted during the life of the revised Forest Plans. As stated in the desired condition for Goal 2.5 (Roads and Trails Access), "Right-of way and easements provide adequate and legal access to National Forest System lands." Laws and regulations that direct access to private lands are outlined in Forest Service Manual, Chapter 2700, Special Uses Management. Chapter 2701.1 – Current Statutory Authorities states: "The Alaska National Interest Lands Conservation Act (ANILCA) provides numerous authorities related to access that are specific to National Forests in Alaska (except for sec. 1323(a), which applies to all National Forest System lands…." Additionally, this section states: "The provisions of section 1323(a) apply to all National Forest System lands. This section provides that, subject to terms and conditions established by the Secretary of Agriculture, the owners of non-Federal land within the National Forest System shall be provided adequate access to their land. Regulations implementing section 1323(a) are set forth at Title 36, Code of Federal Regulations, Part 251, Subpart D - Access to Non-Federal Lands. See FSM 2701.3, paragraph 3, for the summary of the provisions of 36 CFR 251, Subpart D."

    The summary of provisions states: "Title 36, Code of Federal Regulations, Part 251, Subpart D. This Subpart governs procedures by which landowners may apply for access across National Forest System lands, the terms and conditions that govern any special-use authorization that is issued by the Forest Service to permit such access, and the criteria

that authorized officers must consider in evaluating such applications. The rules provide that, subject to the terms and conditions set out in the rules, "landowners shall be authorized such access as the authorized officer deems to be adequate to secure them the reasonable use and enjoyment of their land."

Access: Road Density

19. **Concern Statement:** The Forest Service should clarify the differences in road density standards, among the alternatives and among the management areas. The Forest Service should use existing road densities, not open road densities, in the forest plan revision's analysis. Existing road densities should capture temporary roads, for example.

    Response: The influence of roads varies by resource. The watershed analysis uses existing roads, in part because the condition of closed roads is incompletely known. Reduced traffic should result in reduced road surface erosion, but the effect of roads on watershed runoff varies with the local characteristics of individual road segments as recognized by Lee et al. (1997). The approach proposed for the Forest Plans is to first identify the roads that are hydrologically connected to streams, and then treat those roads or road segments by a variety of means, including but not limited to, out-sloping the road surface, surfacing with gravel, improving road drainage, decreasing the spacing between road drainage features, and dissipating or dispersing road-related runoff. Pilot studies on several national forests, including one study on the Umatilla National Forest, all have shown that a high percentage of road-related sediment is delivered to streams by a small percentage of forest roads. The result of the study of Wall Creek on the Umatilla National Forest by Nelson et al. (2010) was that 90 percent of road-related sediment delivered to streams came from roughly 10 percent of the road network. Based on this, a focus on the specific roads and road drainage features responsible for the majority of sediment delivered to streams appears to be warranted, rather than a strict adherence to road density standards that may or may not address the problem. Further, the authors of the original study on which current road density standards are based (Lee et al. 1997) recognized that local characteristics influence the effects of individual roads on streams and watersheds that could not be identified in their study. Temporary roads are not included in the analysis and are not part of the national forest road system. These roads are intended only for short-term use and measures are taken to restore ground cover and infiltration capacity following their use.

    Likewise, as described in the wildlife section of the forest plans and Final Environmental Impact Statement, the science regarding the effects of roads on elk, for example, has also changed. The traditional measure of open road density has been found not to address the complexities in patterns of open routes or the frequency of use by motor vehicles (Rowland et al. 2000, 2005 as cited in section 2.3.1 of the Forest Plans). Motor vehicle use on the national forests in all seasons is consistently associated with elk distributions, and has increased in recent decades. The approach taken in the Forest Plans and described in the Environmental Impact Statement is based on recognition of the importance of proximity to security and foraging areas in maintaining acceptable elk distributions (Thomas et al. 1979, Wisdom et al. 1986, Rowland et al. 2005). The desired features and extent of elk foraging and security areas on each of the National Forests is displayed in section 2.3.1 of the Forest Plans.

20. **Concern Statement:** The Forest Service should maintain current road densities because this is desired by the majority of the residents of Eastern Oregon. Any proposed reductions should be fully evaluated to determine what they would do to the human

environment and cultural and historic resources. The closing of some roads would increase impacts to other roads. The Forest Service should focus instead on maintaining and upgrading existing infrastructure.

Response: Road densities are likely to change over the course of implementing the revised Forest Plans. The changes are likely to result from implementing stated desired conditions and standards associated with other resource considerations including watershed functions (Goal 1.1) and Rocky Mountain elk (Goal 2.3.1). Proposed actions that would change existing road densities will be analyzed through a separate, site-specific process that would include project-level analysis and public involvement and participation. The concern that closing some roads would create additional impacts to other roads is subject to site-specific analysis, and would likely be considered and analyzed as part of the travel management process that is conducted outside of the forest plan revision process. Maintenance activities and upgrading existing infrastructure are embedded within the revised forest plans and are expressed in desired conditions and objectives for roads and trails access (Goal 2.5).

21. **Concern Statement:** The Forest Service should make the MA 4A General Forest road density 2.4 miles of road per square mile in all of the alternatives.

Response: Road density is defined as an indicator of the concentration of roads in an area. The 1990 Forest Plans each contained road density standards for management areas that were partially based on road density standards identified in biological opinions for endangered and threatened species. The table below displays road density standards for the 1990s forest plans.

Open road density by management area, 1990 forest plans

National Forest	Road Density	Management Area(s)*	Plan Component
Malheur	1.5 miles/square mile	MA 4D Wildlife Emphasis	Standard
	2.2 miles/square mile	MA 4D Winter Range	
	3.2 miles/square mile	Summer Range**	
Umatilla	2 miles/square mile	Forestwide	Desired condition
Wallowa-Whitman	1.5 miles/square mile	MA 4E Winter Range MA 4D General Wildlife/Fish	Standard
	2.5 miles/square mile	MA 4A General Forest	

* See crosswalk in project record for more information.

** Includes all areas outside wildlife emphasis, winter range, and designated wilderness areas

Road density can be further distinguished as open road density. Open road density and corresponding human activity play a key role in determining whether wildlife remains in an area. Human disturbance associated with open roads can displace individual animals and make them vulnerable to harassment, reduce the amount of suitable habitat, and disturb nests and roosting activities. The table below displays road density standards for the Revised Land Management Plan for each alternative for applicable management areas.

Comparison of open road density by management/resource area by alternative, proposed forest plan revision (values stated in table are contained within desired condition plan components unless otherwise noted)

Management/ Resource Area	Alt. B	Alt. C	Alt. D	Alt. E and F	E Modified and E Modified Departure,
MA 3B	1.5 miles/ square mile	N/A[1]	None	Desired Condition[2]	Desired Condition[2]
MA 3C	N/A[1]	1.0 miles/ square mile	N/A[1]	1.0 miles/ square mile	N/A[1]
MA 4A	2.4 miles/ square mile	2.4 miles/ square mile	3.0 miles/ square mile	Desired Condition[2]	Desired Condition[2]
Winter Elk Habitat	1.5 miles/ square mile	1.5 miles/ square mile	1.5 miles/ square mile	1.5 miles/ square mile	Guideline (see RME-2G)

1. Indicates management area allocation is not contained within alternative.

2. Desired condition for these management areas is to reduce road-related sedimentation by reducing road density and reducing hydrologic connectivity of the road system.

As displayed in the table above, road density values vary per alternative. Specifically, road densities for Management Area 4A (General Forest) are 2.4 miles per square mile for alternatives B and C; 3.0 miles for alternative D; and is stated as a desired condition for alternatives E, E Modified, E Modified Departure, and F. Standards for Rocky Mountain elk (Goal 2.3.1) and watershed functions (Goal 1.1) may also influence the national forest transportation system, and subsequently road density, through future project level analysis that will include public involvement and participation.

22. **Concern Statement:** The Forest Service should comprehensively inventory existing roads so sound decisions can be made regarding route density. Maps do not accurately depict open or closed roads (some closed due to deterioration). Reclassification or removing roads from maps does not address actual ecological damage from these roads. If the Forest Service is going to remove roads, it should have a timeline, particularly for culvert repairs and replacements, that impede fish passage and for road removals in priority or key watersheds.

    Response: The individual national forests each have completed inventories of their road systems that include route status, road surface type, and other features. The display of route status on national forest user maps is up to each individual national forest, but must follow Forest Service regulations and policy. The current standard for roads that are removed from the national forest road system (decommissioned roads) is to remove all culverts; treatment of road surfaces of decommissioned roads varies and may range from barricading the road, to ripping and seeding the road surface, and may or may not restore the road to the original surface contour. Some roads are closed to motor vehicle use and are considered to be in storage. These roads are typically not shown on motor vehicle use maps because they are not intended for public use.

    Decisions based on road inventories, and subsequent road density, are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212) or through site-specific project analysis. The Forest Plans do not make travel management-related decisions that designate routes, trails, or areas open to motor-vehicle uses.

23. **Concern Statement:** The Forest Service should gate roads needed for management purposes and restore unneeded roads to a natural condition. Roads should be monitored to address compaction and other legacy road problems. Additionally, the Forest Service

should close redundant roads, prohibit cross-country motorized traffic, and shorten or eliminate cherry-stem roads, especially on the Wallowa-Whitman National Forest.

Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. These designations are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212). Similarly, closure treatments (such as installing gates) on specific routes is considered in site-specific project or planning analysis and not in the forest plan revision process. Road restoration efforts would also be analyzed through site-specific analysis, and may consider a range of treatments including ripping and seeding the road surface, and restoring the road to the original surface contour. Monitoring the success of individual project implementation for road closures or decommissioning would be accomplished at the site-specific project level and may be considered effectiveness monitoring. Both the revised Forest Plans and the travel analysis reports resulting from the travel analysis process (Subpart A of the Travel Management Rule) are intended to inform the travel management process that includes analyzing the national forest transportation system including "redundant" roads, cross-country motorized traffic, and "cherry-stem" roads.

24. **Concern Statement:** The Forest Service should better define how road density standards are connected to hydrology and will be protective of the environment. In addition, some commenters ask that road density targets, especially for aquatic species, not be advisory or only addressed through desired conditions.

    Response: The Final Environmental Impact Statement describes the hydrological effects of roads, recognizing that these effects vary with the nature of individual roads, how they are built, and where they are located. The analysis acknowledges that most attributes of roads, including the frequency of stream crossings, potential for sediment delivery, and hydrologic effects are related to road density. As described in previous responses, it is also true that local site factors influence how roads interact with streams and watersheds, and that a relatively small percentage of roads or road segments is typically responsible for a high percentage of the hydrological effects of roads. For these reasons, the Revised Plans would take the approach of first locating and treating the roads that are directly hydrologically connected to streams and are most likely to have the greatest effect on watershed hydrology and sediment delivery to streams. Relying solely on road density may or may not lead to the identification of roads or road segments that have the greatest effects on hydrology. It remains that the effects of forest roads cannot be completely eliminated, and that for some roads, relocation or decommissioning may be the only way to eliminate adverse effects.

25. **Concern Statement:** The Forest Service should substantially reduce road densities throughout the national forests to improve watershed condition and aquatic habitat, protect and restore wildlife corridors, key habitats, and ecological processes, especially in light of climate change that increases water flow over roads. A reduction in roads would reduce erosion, impacts on sensitive wildlife and aquatic species, and maintenance costs.

    Response: The Forest Plans have stated objectives for reducing the effects of roads, and specifically to reduce road-related sediment delivery to streams. Open road density is currently 2.1 miles per square mile on the Malheur National Forest, 1.5 miles/square mile on the Wallowa-Whitman National Forest, and 1.1 miles per square mile on the Umatilla National Forest. Open road densities on the national forests range from 2.3 to 2.5 miles per square mile when designated wilderness and inventoried roadless areas are excluded. The national forests have closed or decommissioned 45 to 55 percent of roads existing as

of 1990. Reduced traffic levels on closed roads should result in reduced surface erosion and sediment delivery to streams (Reid and Dunne 1984). Preliminary results suggest that road decommissioning has been shown to effectively reduce sediment delivery to streams on national forests in the Pacific Northwest Region and has been effective at reducing road surface erosion and road-related sediment delivery to streams (Black et al. 2017). As in the responses to previous comments, the Plans propose the approach of first locating and treating the roads that have the greatest effects on surface hydrology and sediment delivery to streams and includes objectives for treating these roads.

26. **Concern Statement:** The Forest Service should not look at road densities but should look instead at ecological conditions and at specific roads that contribute sediment issues to aquatic and riparian systems or impact wildlife.

    Response: As stated in the responses to previous comments, we recognize that road density matters, but more importantly that all roads do not have the same effect, and roads differ in their effects to aquatic and terrestrial species. To address hydrologic connectivity and sediment delivery to streams, it will be necessary to look at local factors that determine how roads interact with the surrounding landscape and with streams. The use of the 300-foot buffer is not intended to identify specific roads and is only used as a first approximation of the total miles of hydrologically connected roads. The resulting total is within the range of published studies elsewhere in Oregon.

Access: Road Maintenance and Funding

27. **Concern Statement:** The Forest Service should use funds efficiently and leverage or supplement road maintenance by allowing users to maintain roads, charging tolls for paved roads, working with motorized recreationists to obtain grants, or using income from timber harvests. In addition, the Forest Service should accurately inventory road conditions and estimate the annual road maintenance shortfall, to determine the true total cost of deferred maintenance, to plan how to reach the desired condition. Funding should be prioritized by road maintenance conditions.

    Response: The Environmental Impact Statement reviews road maintenance and identifies varying miles of road maintenance for each alternative. Options to supplement road maintenance are outside the scope of the forest plan revision process. However, the Blue Mountains national forests use off-highway vehicle funds made available by the state of Oregon and managed by the Oregon Department of Parks and Recreation through a grant system. Each national forest competes for these funds with other entities by submitting annual grant applications. We recognize that these funds need to be dedicated to the motorized component of the road and trail system, and the National Forests annually honor that commitment.

    Site-specific analysis is required for the other examples presented in the concern statement: charging tolls, collaborating with outside groups to obtain grants, and income derived from timber harvests. These types of site- and activity-specific actions would require additional project analysis conducted outside of the forest plan revision process, and is some cases may exceed Forest Service authority or not align with existing regulation and policy.

    The individual National Forests each have completed inventories of their road systems that include route status, road surface type, and other features. The Forest Service has available only about 20 percent of funds necessary to fully maintain Forest Service roads to intended safety, service, and environmental standards. Because of the severity of

deferred road maintenance throughout the National Forest Service System, approximated to be nearly three billion dollars, national efforts are dedicated to revising the "Deferred Maintenance Protocol for Roads" to ensure the integrity of the sample selection and projection process. Budget and funding priorities are subsequent administrative activities that are not part of the revised forest plan decision.

28. **Concern Statement:** The Forest Service should not use budgetary restrictions as a reason why road maintenance does not get done or why roads are closed or removed, thereby, restricting public access.

    Response: Road maintenance is reviewed in the plan through the objectives stated as miles of road maintenance per decade, with varying miles for each alternative. As stated in the Final Environmental Impact State: "Objectives are projections of Forest Service activities and program outcomes that are measurable and time specific. Like goals and desired conditions, objectives are not commitments or final decisions approving projects or activities. They are a way to measure progress towards meeting or maintaining the desired conditions over the life of the plan. The objectives reflect activities and program outcomes necessary to maintain or achieve desired conditions."

    Objectives are further described as being "based on ecological needs, community capacity, and expected funding, including budgets, partnerships, and cooperative agreements. The actual accomplishments will be dependent on actual funding, staffing levels, and local infrastructure." As stated above, budget and funding priorities are subsequent administrative activities that are not part of the revised Forest Plan decision.

29. **Concern Statement:** The Forest Service should make funds available to maintain public access for Maintenance Level 1 and Maintenance Level 2 roads (or classify these and other roads as motorized trails) in order to assuage local animosity over the perceived threat of continual road closures and reduce impacts created by a lack of access.

    Response: Budget and funding priorities are subsequent administrative activities that are not part of the revised Forest Plan decision. Forest plan approval, amendment and revision does not authorize, fund or carry out any projects, unless specifically stated in the decision document. Forest Plan objectives do identify a projected amount of road maintenance for maintenance level 2 roads; in contrast, no miles are projected for maintenance level 1 roads. These roads are kept on the transportation system for intermittent project use and are closed to vehicular traffic between projects. The closure period must exceed one year for the road to be assigned maintenance level 1 status. Maintenance level 1 roads are considered during program planning as a low priority for investment of time and funds, with limited resources focused to prevent impacts to resource while in closed status.

Access: Roads-Wildlife

30. **Concern Statement:** The Forest Service should provide current scientific justifications regarding how motorized uses on trails, unpaved roads, and paved roads negatively impact wildlife to the point of deeming wildlife habitat unusable. In reality, wildlife uses roads for its own travel or migrating purposes.

    Response: The Final Environmental Impact Statement provides literature citations under Environmental Consequences – Terrestrial Species Viability in the "Terrestrial Wildlife Species" section. These references are used to support the wildlife viability analysis and are used in discussing general effects of national forest management, including road and

trail construction and use, on wildlife. Please refer to these sections for a more detailed discussion on motorized uses and affects to wildlife.

Access: RS 2477

31. **Concern Statement:** The Forest Service should acknowledge that some roads in the national forest are public rights-of-way, especially those set aside as part of Revised Statute (RS) 2477 and should not be closed by the Forest Service.

    Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses as that process is completed through the Travel Management process. The Forest Service recognizes legally documented rights-of-way held by the state, county, or other public entities and these conditions are considered during the travel management analysis and planning. This includes rights-of-way under RS 2477 that have been adjudicated through the Federal court system or otherwise formally established such as easements under the Federal Roads and Trails Act (FRTA). Due to the limited role of RS 2477 rights-of-way in the forest plan revision process, this issue does not involve discernable effects and is outside the scope of the forest plan revision process and analysis. Additionally, no existing adjudicated RS 2477 routes are located within the Blue Mountains national forests.

Access: Snowmobile Access

32. **Concern Statement:** The Forest Service should maintain access for on- and off-trail snowmobiling everywhere, including the Tollgate area. Snowmobilers respect the forest and help maintain trails, and unlike off-highway vehicles, snowmobiles leave no trace. Snowmobiling has a large economic impact in some small communities in the area. Wildlife are impacted less by snowmobiles than by hikers. The Forest Service should consider the impact of cross-country ski and snowshoe areas as well as snowmobiling on wildlife.

    Response: The revised forest plans describe motorized winter access through suitability ratings for each management area, and those ratings vary by alternative. In general, areas rated as unsuitable for motorized winter use include designated wilderness (Management Area 1A), recommended wilderness (Management Area 1B), and backcountry nonmotorized (Management Area 3A). The majority of the Blue Mountains national forests are rated as suitable for winter motorized access. As stated in similar responses presented above, the Forest Plans do not designate roads, trails, and areas for motorized use. These designations are completed through travel management planning and project-level analysis. For winter motorized use, the analysis and designation process will follow the regulations outlined in Subpart C of the Travel Management Rule (36 CFR 212).

    We also recognize and agree that winter motorized use significantly contributes to those gateway communities that promote winter sports activity, and that continued, sustainable access helps support these local economies.

    Winter motorized use does have varying impacts on wildlife. As stated in the Final Environmental Impact Statement: “Physical impacts may include effects to wildlife that include increased stress, reduced survival and productivity, impaired immune function, disruption to movement patterns, and changes to behavioral adaptations” (Smith 2013). Future travel management planning and analysis will likely take into consideration these types of effects resulting from winter motorized use. Future analysis will also include

important social and economic considerations as part of the travel management planning analysis.

33. **Concern Statement:** The Forest Service should minimize over-the-snow vehicle use, as the 4.6 million acres currently classified as suitable for motorized recreation is excessive and disruptive to nonmotorized users' experience. Restricting winter motorized recreation would protect wildlife, air and water quality, human health (toxins and carcinogens in snowmobile exhaust), human safety, peace, and quiet (soundscape).

    Response: As noted in the responses presented above, the revised Forest Plans describe motorized winter access through suitability ratings for each management area, and those ratings vary by alternative in the Final Environmental Impact Statement. Conversely, these alternatives present a range of nonmotorized winter use areas (acres) that provide for quiet recreation opportunities, and the associated challenge and solitude that users can expect to experience.

    We recognize and agree that certain winter recreation opportunities may conflict with one another. As stated in the Final Environmental Impact Statement, winter motorized use may create social impacts that are "…marked by increased noise and by reduced visual and scenic quality. Snow machines are often audible over great distances, and tracks in snowfields and high mark play areas may be widespread and affect natural appearance and sense of solitude." Future travel management planning and analysis will likely take into consideration these types of social effects resulting from winter motorized use when designating roads, trails, and areas for winter motorized use under Subpart C of the Travel Management Rule (36 CFR 212)..

34. **Concern Statement:** The Forest Service should provide a quantitative assessment showing the number of people who want snowmobile access maintained compared to those that don't to support an informed decision.

    Response: The public involvement process required for the forest plan revision process is outlined in Chapter 1 of the Final Environmental Impact Statement, and states in part:

    > "In February 2014 the Forest Service published the Blue Mountains Proposed Revised Land Management Plan (Draft Forest Plan) and Draft Environmental Impact Statement. From March through June 2014, the three National Forests hosted 14 public meetings and a webinar to provide information about the documents, explain the formal public comment process, answer questions, and listen to public input. We received more than 1,100 letters on the Draft Forest Plan and Draft Environmental Impact Statement from the public, and we identified over 4,300 comments."

    In considering the public comments received, it is important for readers and decisionmakers to understand that the comment analysis process does not evaluate public input as if it were a vote. The information requested by the commenter is not available and is not part of the comment evaluation process. Rather, the content analysis process ensures that every comment is considered during the process.

Access: Special-Use Permits

35. **Concern Statement:** The Forest Service should not require private landowners, allotment owners or those with mining rights to acquire a special-use permit to access public roads. Permits limit opportunities for general public use.

Response: The Forest Service is required to follow all federal laws, regulations, and policies including those that may be enacted during the life of this revised Forest Plan. See response above (Access: Private Lands and Other Ownerships) for complete policy direction and for references and procedures by which landowners may apply for access across National Forest System lands.

For permitted grazing use, the Forest Service provides access for allotment permittees through site-specific analysis that subsequently is incorporated into allotment management plans. For mining use, existing regulations require that the request for road access to mining claims may be granted as part of an approved plan of operations, and is subject to analysis of the need and the proof of a valid mineral claim.

Access: Trail Maintenance

36. **Concern Statement:** The Forest Service should prioritize funding trail maintenance and should partner with volunteers and non-governmental organizations to address trail maintenance needs.

    Response: Budget and funding priorities are subsequent administrative activities that are not part of the revised Forest Plan decision. Forest plan approval, amendment and revision does not authorize, fund or carry out any projects, unless specifically stated in the decision document. The National Forest System Trails Stewardship Act (Public Law 114-245) directs the Department of Agriculture to develop and publish a national strategy aimed at significantly increasing the role of volunteers and partners in trail maintenance. The national forests also uses existing authorities and policies to partner with volunteer groups for trail maintenance throughout National Forest System lands.

Aquatics

Aquatics: At-risk and Federally Listed Species

37. **Concern Statement:** The Forest Service should reduce impacts to bull trout by reducing land management uses, such as grazing, mining and logging, and road use in its habitat, especially in national forest lands in Pine, Indian and Wildhorse creeks and the Powder River. The agency should disclose risks to the fish's small population, like genetic drift, and provide risk rankings of its core areas in the northwestern United States. The Forest Service should engage with the U.S. Fish and Wildlife Service to coordinate consistent monitoring of bull trout populations.

    Response: The effects of the revised Forest Plans on bull trout and their designated critical habitat in the Malheur, Umatilla and Wallowa-Whitman national forests are undergoing consultation with the U.S. Fish and Wildlife Service at present. They are preparing a Biological Opinion on the preferred alternative for the revised Plans. The content of the new Biological Opinion will be fully considered before a final decision is made on the preferred Plan Revision alternative.

    The Pine, Indian and Wildhorse Creek bull trout core area is predominantly located in the Hells Canyon National Recreation Area (HCNRA) in the Brownlee Reservoir subbasin, as displayed in the fisheries analysis in Volume 2 of the FEIS. Only the upper portions of the Pine Creek watershed (Oregon) portion of this core area would be affected by the revised Forest Plan for the Wallowa-Whitman National Forest. Indian and Wildhorse Creeks are located in Idaho and are not in the Blue Mountains Forest Plan Revision

planning area. Although they are in the HCNRA and part of this bull trout core area, they are not subject to the upcoming Biological Opinion or the preferred alternative.

The lower end of the Pine Creek watershed lies within the Hells Canyon National Recreation Area, which is outside the planning area for the Blue Mountains Forest Plan Revision. No management changes are proposed for the HCNRA. It will continue to be managed under the HCNRA Comprehensive Management Plan as amended by PACFISH. The existing management direction for the HCNRA will be carried forward in its entirety under the Wallowa-Whitman National Forest's revised Plan. Although the Hells Canyon National Recreation Area (HCNRA) is not part of the current planning area, we have reinitiated consultation; specifically for bull trout-designated Critical Habitat in the Oregon portion of the HCNRA as their critical habitat was designated in 2010 after the HCNRA Comprehensive Management Plan (CMP) was consulted for bull trout in 2003. We are not reinitiating consultation on effects to bull trout, the species, for the HCNRA CMP. The new Biological Opinion may provide additional guidance for future management of bull trout critical habitat in the HCNRA.

Bull trout habitat in the upper portions of the Pine Creek drainage are in the Plan Revision planning area and would be managed under the revised Forest Plan for the Wallowa-Whitman National Forest. In terms of reducing certain land uses as requested, we would note the following:

- Only Congress has authority to withdraw lands from mineral entry. Under existing laws, the Forest Service lacks legal authority to "reduce mining". We do however have the legal authority to manage surface disturbances associated with mining to minimize effects to bull trout and other aquatic species in lands open to mining. That authority would be exercised through Plan components including Desired Conditions and relevant Standards and Guidelines in the Blue Mountains Aquatic and Riparian Conservation Strategy (Appendix A of the revised Forest Plan). Relevant standards and guidelines designed to avoid or minimize effects to bull trout from mining include but are not limited to MM-1G through MM-5GS, and KW-1S through KW-3S.
- The preferred alternative ("The revised Plan) proposes to expand default widths of Riparian Management Areas beyond those established as defaults for similar streams under PACFISH and INFISH, and establishes additional RMAs for ephemeral channels, which were not always previously protected by RHCAs when they did not satisfy criteria defining intermittent channels which were covered by PACFISH and INFISH. These expanded widths, together with Desired Conditions for RMAs are expected to strengthen protections for bull trout and their habitats and ensure that timber management activities potentially affecting riparian and aquatic habitats will ultimately accelerate progress in meeting desired conditions for water quality, aquatic habitat complexity and hydrologic function relative to the near-natural rates of recovery ongoing under PACFISH and INFISH direction.
- Since the Forest Plans were first signed in 1990, open road networks have been substantially reduced on each of the three forests. More than 11,000 miles of roads have been closed and more than 2,000 miles of roads have been decommissioned. As part of the Blue Mountains Aquatic and Riparian Conservation Strategy, Appendix A of the Plan, key watersheds have rigorous standards and guidelines (KW-1S in particular) designed to ensure that road networks in the best remaining bull trout habitat not only do not continue to incrementally increase negative effects from

sediment inputs, loss of streamside shade or reduced large wood recruitment or experience accelerated runoff through extension of the natural drainage networks. That particular standard is designed to cumulatively reduce net effects of problematic roads in watersheds occupied by federally listed species including bull trout. Restoration objectives for priority watersheds inhabited by bull trout are designed to identify and reduce impacts of the relatively small subset of roads identified through site-specific analysis as those creating the greatest impacts to water quality and aquatic habitats.

- So far as reducing grazing impacts to bull trout, standards and guidelines specific to grazing (in particular GM-3) have been developed to require more rigorous and timely analyses, the results of which are expected to result in management changes that will further reduce impacts of livestock grazing in degraded watersheds containing federally listed species such as bull trout, when livestock grazing is contributing to those degraded conditions. That standard also requires that watersheds with good aquatic habitat conditions are maintained in good condition, and that livestock grazing be managed to maintain those conditions, when grazing poses a risk of degrading those conditions unless management focuses on prevention of such effects.

Forest Service biologists regularly exchange information with the U.S. Fish and Wildlife Service, as well as other Federal and State agencies, regarding bull trout distribution and habitat conditions for bull trout populations in the planning area. That information is considered when U.S. Fish and Wildlife Service produces their status reviews for bull trout at 5-year intervals as required by law. The draft status reviews are available for public comment prior to being finalized in the Federal Register. The most recent population-status information available for the Powder River and Pine, Indian and Wildhorse core areas as well as all other core areas was published with the Bull Trout Recovery Plan (USFWS, 2015), and was considered in the fisheries analysis in Volume 2 of the FEIS.

38. **Concern Statement:** The Forest Service should follow the State's lead on bull trout by recognizing it does not need to be listed if a viable population exists locally.

    Response: By law, the U.S. Fish and Wildlife Service has the authority to list and delist resident fish species under the Endangered Species Act, and make those decisions based on best available information, which they update at 5-year intervals through the Federal Register. The Forest Service has obligations under the Endangered Species Act to use our authorities to help recover federally listed species. Forest management must comply with all applicable laws and regulations, including the Endangered Species Act (see Appendix D-Laws and Regulations).

39. **Concern Statement:** The Forest Service should make all federally listed and state-sensitive aquatic species management indicator species. At the least, the agency should add at-risk aquatic species, such as the redband trout, bull trout, steelhead and spring Chinook salmon because there are no aquatic management indicator species in the forest revision plan. In addition, it would be beneficial to have a riparian-dependent management indicator species, such as an amphibian.

    Response: The National Forest Management Act of 1976 assumed that population trends for each management indicator species would reflect the effects of forest management activities on that species. A management indicator species must also be distributed widely enough in areas where management activities will occur, to be able to tie population

trends for the species to the effects of forest management. For reasons discussed in Chapter 3, "Aquatic Species" in the Draft Environmental Impact Statement, we selected redband trout, steelhead, bull trout and spring Chinook salmon as aquatic focal species rather than as management indicator species. In the Final Environmental Impact Statement, focal species have been reframed as "surrogate species," which represent other at-risk species with similar habitat characteristics and distributions. Our ability to determine the effects of forest management on population trends for these particular species as aquatic management indicator species has previously proven ineffective for reasons discussed in the "Aquatic Species" section.

The revised Forest Plans will monitor trends in actual aquatic habitat conditions on National Forest System lands used by the selected surrogate aquatic species, since aquatic habitat conditions and trends on National Forest System lands have much more direct association with effects of forest management, and since numerous other factors that influence population trends in these species are unrelated to forest management.

There are no amphibian management indicator and focal species. Management indicator and focal species were selected because they are believed to be indicative of key characteristics of ecological integrity and are responsive to ecological conditions in a way that can inform plan decisions. More explanation on the rationale for selecting focal species can be found in the project record.

40. **Concern Statement:** The Forest Service should provide for the viability of the Pacific and western brook lamprey.

    Response: In Chapter 3, "Aquatic Species" the "Surrogate Species" and "Sensitive Species" sections provide rationales for why brook lamprey and Pacific lamprey were not selected for in-depth analysis. It also explains why steelhead and redband trout and bull trout were chosen as surrogate species for analysis for these and other species with somewhat similar seasonal needs and habitat affinities according to their life histories and/or natural behaviors. Viability for these species is represented by effects to surrogate species for which effects were analyzed, as noted in the analysis.

41. **Concern Statement:** The Forest Service should improve survey protocols and standardize data collection methods regarding at-risk and federally listed species, with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service and the State departments. In addition, the Forest Service should explain how management indicator species data, including surveys, are used to assess species trends.

    Response: The rationale for discontinued use of the management indicator species concept with regard to aquatic species was explained in the "Aquatic Species" section of Chapter 3 in the effects analysis for alternative A, the no-action alternative of the Draft Environmental Impact Statement. The analysis of the revised plan alternatives focus on effects to habitat for aquatic surrogate species.

42. **Concern Statement:** The Forest Service should re-introduce federally listed fish species after restoring its habitat.

    Response: The Forest Service is not the lead agency with regard to management of federally listed fish or other native aquatic species. We are land managers. Our primary role and responsibility with respect to reintroductions is to protect and restore the habitat needed to support recovery of those species. The Forest Service is willing to assist the states with reintroductions of native species in those locations that the states, in conjunction with U.S. Fish and Wildlife Service or National Marine Fisheries Service,

have determined are needed, per the recovery plans for those species, when there is mutual agreement that habitat is capable of supporting those reintroductions.

43. **Concern Statement:** The Forest Service should clarify why certain fish species (Snake River Basin fall Chinook salmon, Snake River Basin spring/summer Chinook salmon, and Snake River Basin steelhead) are identified as "likely to become endangered" if fish populations are generally increasing.

    Response: Snake River Basin spring, summer and fall Chinook salmon are all listed as threatened under the Endangered Species Act. Under the Act, "threatened" species, by definition, are "likely to become endangered." Until population numbers are sufficiently recovered for the relevant populations, as prescribed in recovery plans for these species, they will remain listed as threatened under the Act. National Marine Fisheries Service is the agency responsible for listing and delisting these particular species when their populations have sufficiently recovered, based on criteria established in the recovery plans, which described the threats to each listed species and remedies to resolve those threats. Both U.S. Fish and Wildlife Service and National Marine Fisheries Service publish population status and trend information in recovery plans and in 5-year status reviews, which assess progress in reducing identified threats, including threats outside of National Forest System lands or outside of Forest Service authorities. The most recent status reviews and recovery plans are cited as the source for status and trend information in Tables 241-243, see the table footnotes. Threat information is extremely detailed in the source documents, more than can reasonably be repeated here, and thus has been incorporated by reference.

44. **Concern Statement:** The Forest Service should focus on the viability of the margined sculpin and potential impacts to the fish species from agency actions.

    Response: Redband trout, steelhead, bull trout and their habitats were discussed in the focal species section of the Draft Environmental Impact Statement, Volume 2. As clarified in the Final Statement, under the revised Forest Plans these species would serve as surrogates for other at-risk species with similar habitat requirements and distributions, including margined sculpins. Effects to sensitive margined sculpin are based on existing fair to good habitat conditions and relative effects of alternatives on habitats for these surrogate species in shared subbasins, as disclosed in the "Existing Condition" sections for the pertinent surrogate species, and in the "Environmental Consequences" and "Cumulative Effects to Sensitive Species" sections. These sections discuss margined sculpin habitat conditions, distributions, habitat requirements and effects to their habitat in the Tucannon, based on the corresponding analyses for redband trout and bull trout habitat and species characteristics as surrogates for margined sculpin habitat and species characteristics.

45. **Concern Statement:** The Forest Service should not identify national forest streams, particularly within the Malheur National Forest, as fishery strongholds that do not meet the definition of a stronghold.

    Response: The revised Forest Plans identify key watersheds as displayed in the Blue Mountains Aquatic and Riparian Conservation Strategy (2018 ARCS) (see Revised Forest Plan, Appendix A). Key watersheds are areas that either currently serve as strongholds for important aquatic species or have the potential to do so. Key watersheds were selected on the basis of relative population strength of four selected focal species, watershed, and aquatic habitat conditions using the process described in Reiss et al. (2008). How these

methods have been applied to the Blue Mountains is described in the 2018 Blue Mountains ARCS.

46. **Concern Statement:** The Forest Service should detail how at-risk aquatic species living outside a priority watershed will continue their recovery.

    Response: Habitats for fish species with management concerns (at-risk species) would be managed consistent with the 2018 Blue Mountains Aquatic Restoration and Conservation Strategy. Key watersheds identified in the Forest Plans are areas with the best relative habitat conditions and strongest populations of one or more of four selected surrogate species whose distributions and habitat requirements represent distributions and habitat requirements of other at-risk species. Priority watersheds are key watersheds that have been selected by each national forest as priorities for active restoration during the life of each Plan. It is expected that once restoration needs in these watersheds are completed that other key watersheds will be selected as new priorities for active restoration. In addition, with few exceptions, the desired conditions for watersheds, riparian areas, threatened and endangered species, and aquatic habitats in the Plan apply across all watersheds. Most standards and guidelines apply across all watersheds, with a few additional standards and guidelines that apply only in key watersheds. The standards and guidelines that are specific to key watersheds will also be applied to watersheds not named as key watersheds that contain designated critical habitat for federally listed fish species. These watersheds are all addressed in the biological assessment for the preferred alternative.

Aquatics: Habitat

47. **Concern Statement:** The Forest Service should facilitate migration of species, both aquatic and terrestrial, to historical habitat through built structures, including underpasses on roadways.

    Response: The Forest Service recognizes the need to provide for aquatic organism and fish passage. An active program to redesign stream crossings and facilitate fish passage has been active since at least 2001 and has resulted in the replacement of more than 200 stream crossing culverts and reconnected several hundred miles of previously inaccessible habitat.

    On some roads, including Interstate Highways and State Highways, jurisdiction may fall to State agencies and the Forest Service may be a cooperator, but may not be the lead agency.

48. **Concern Statement:** The Forest Service should not indicate that McClellan Creek and the McClellan Mountain watershed of the Malheur National Forest provide close to a mile of essential salmonid habitat because a cataract exists in the creek on private land preventing any fish passage. This misstatement causes an unnecessary burden on the landowner, who is also a grazing permittee.

    Response: National Marine Fisheries Service is the agency responsible for identifying essential fish habitat. As of 2016, they are no longer identifying essential fish habitat for Pacific salmon in the John Day River Basin, to which McClellan Creek and the McClellan Mountain watershed are tributary. The information regarding designation of essential fish habitat has been updated in the “Aquatic Species” section of the analysis in the Final Environmental Impact Statement.

49. **Concern Statement:** The Forest Service should adhere to state restoration priorities in the Oregon Middle Columbia River Steelhead Recovery Plan and state fish passage laws and best management practices (BMPs) pertaining to stream-crossing structures.

    Response: The Forest Service recognizes the priorities stated in recovery plans and uses the best available science and best management practices in the design and construction of stream crossing structures. The Forest Service has a policy for providing fish and aquatic organism passage. On National Forest System roads, the Forest Service has had an active program of replacing culverts to provide for aquatic organism passage in streams on National Forest Systems lands in the Blue Mountains since 2001.

    Oregon Department of Fisheries and Wildlife biologists are routinely invited to review fish passage designs as a standard procedure. Forest Service fish passage designs are developed by interdisciplinary teams of fisheries biologists, hydrologists and licensed physical engineers to provide for passage of all aquatic organisms. They are rigorously trained in Forest Service fish passage design methodologies, which are based on best available science. The Oregon Department's screen shop staff in John Day have helped implement Forest Service designs for fish passage on National Forest System lands in the planning area since 2014. Key watersheds and applicable Forest Plan management direction provide protection and restoration for priority tributaries identified in the Oregon Middle Columbia River Steelhead Recovery Plan. Consistent with agency policy, we employ best management practices for all our projects including aquatic organism passage projects, consistent with the Oregon Middle Columbia River Steelhead Recovery Plan.

50. **Concern Statement:** The Forest Service should not claim that the remaining high-quality aquatic habitat is on federal lands rather than private lands.

    Response: Part of the basis for the statement is that 80 percent anadromous fish species use habitats on Federal lands for part of their life cycle (Gregory and Bisson 1997). Lee et al. (1997) and Williams and Williams (1997) recognized the watersheds retaining the best remaining habitats are often restricted to headwater streams (and that headwater streams are commonly located on national forests). The work done by Lee et al (1997) evaluated fish populations and habitat conditions throughout the Interior Columbia Basin, including those in the current planning area. Sedell et al. (1990) noted few reaches of large streams in the western U.S. were in pristine condition and that rivers in the best condition tended to be located within wilderness areas in national parks. Based in part on work by Sedell et al. (1990), and Reeves and Sedell (1992), FEMAT (1993) recognized the need to preserve and protect watersheds containing the best remaining habitats. This led to the selection of 162 key watersheds, covering 8 million acres, or one-third of the area of federally managed lands within the range of the northern spotted owl. The same principal was used to select key and priority watersheds in PACFISH and INFISH, respectively, and to identify key watersheds for the proposed forest plans on national forests in the Blue Mountains.

    This is not intended to mean that habitats on the three National Forests are not also degraded, because we recognize that they are. It simply means that protection of remaining high quality habitats while restoring watersheds of lesser quality, and creating well-connected larger blocks of good habitat, is necessary for the long-term survival of threatened and endangered fish species. For example, according to recent evaluations by the Grande Ronde Model Watershed (2013), the north and south forks of Catherine Creek ("Upper Catherine Creek") are in relatively better condition than habitat conditions in the

middle, and lower reaches of Catherine Creek and their tributaries. The North Fork, South Fork, Milk Creek and Little Catherine Creek key subwatersheds were selected as priority subwatersheds for restoration by the Wallowa-Whitman National Forest staff, which is consistent with evaluations done by the Grande Ronde Model Watershed working group. Note that these particular key watersheds are still in need of restoration based on Model Watershed assessments, but to a lesser degree than the middle and lower portions of the Catherine Creek watershed. Restoration work is also planned for the lower and middle portions of the watershed, but the majority of the needed work is expected to occur sometime after 2018.
https://www.grmw.org/static/documents/data/assessment_documents/PieMapUpperGrandeRonde_Chinook_XLS_20130530_20130701.pdf

Aquatics: PACFISH/INFISH

51. **Concern Statement:** The Forest Service should follow the protective PACFISH and INFISH direction without adding additional constraints. PACFISH and INFISH direction from the 1990 plan should be carried forward.

    Response: The 2018 Blue Mountains ARCS (Appendix A of the Forest Plans) is tailored to conditions and concerns specific to the Blue Mountains Plan Revision area, and is based on lessons learned through implementation of PACFISH and INFISH over the past 20 years. The proposal to replace PACFISH and INFISH with an updated aquatic strategy that incorporates 20 years of updated science and lessons learned through implementation of PACFISH, INFISH and the Northwest Forest Plan, makes sense to us at both local and regional scales, as discussed in the introduction to the 2018 Blue Mountains ARCS, which is a variation on the 2008 and 2016 versions of the regional ARCS, which were developed at the request of the Regional Forester for use in revised Forest Plans. Both E-modified and E-modified-departure alternatives include the 2018 Blue Mountains ARCS as part of those alternatives. Alternatives B, C, D, E, and F all incorporate the 2008 Regional ARCS. The No-Action alternative A would continue to apply PACFISH and INFISH. The Regional Forester will ultimately decide which alternative will go forward as the revised plan for each of the Blue Mountains National Forests, in the Record of Decision, and is free to modify the selected alternative at that time, including whether to continue use of PACFISH and INFISH, or to adopt the 2018 BMARCS as part of the selected alternative, or whether to substitute a regional version of the ARCS as part of the selected alternative.

52. **Concern Statement:** The Forest Service should detail how its PACFISH-related riparian management objectives can be measured to determine effectiveness of agency actions.

    Response: To be effective, riparian management objectives, as originally developed for PACFISH, should reflect the characteristics of streams in good condition, and account for the variability of channel properties of different channel types in different geologic and climatic settings. Riparian management objectives should be able to discriminate altered streams and poor habitat conditions from unaltered streams and good habitat conditions.

    Riparian management objectives are clearly measurable, but some have not been effective at determining habitat conditions and none account for differences in the characteristics of different channel types, or recognize the distribution of channel types in different watersheds. This appears, at least in part, to have resulted from the fact that the channel classification systems that are currently most commonly used (Rosgen 1994, 1996; Montgomery and Buffington 1993, 1997), were not fully developed when riparian

management objectives were first introduced in PACFISH. Both classification systems recognize differences in channel properties between different channel types and the Montgomery and Buffington classification, in particular, recognizes that individual watersheds have different distributions of channel types (Buffington et al 2004). Channel types in the two classification system are not strictly equivalent (Buffington and Montgomery 2013).

The original riparian management objectives were developed from the attributes of streams with "strong" populations of native fish (Williams and Reeves 2006). It was assumed that the derived values, based on "broad averages" of habitat attributes of selected streams were representative of good conditions. The opposite argument, that streams that do not meet riparian management objectives must be in poor condition, is often untrue. For example, it has been shown that none of more than 700 PACFISH-INFISH Biological Opinion managed or reference monitoring sites meet all of the PACFISH Riparian Management Objectives (Kershner and Roper 2010).

Alternative E-Modified includes a standard that specifies that management actions will maintain riparian and aquatic habitat conditions when present conditions are properly functioning, and move towards desired conditions when existing conditions are not properly functioning. This appears to be because riparian management objectives are not adequate for characterizing streams in general, but also are not adequate for characterizing streams of any particular channel type

Most of the PACFISH riparian management objectives are included in the matrix of pathways and indicators, but some may be revised to reflect more appropriate values based on the potential characteristics of streams in the Blue Mountains.

53. **Concern Statement:** The Forest Service should not follow PACFISH and INFISH guidance as part of its aquatic strategy because these were created as interim guidelines, not intended to be permanent.

    Response: See Appendix A in each Forest Plan: Blue Mountains Aquatic-Riparian Conservation Strategy (ARCS) for a comparison of the ARCS and how it differs from PACFISH and INFISH direction.

    Biological Opinions for PACFISH (NMFS 1995,1998) and INFISH (USFWS 1998) identified specific weaknesses of PACFISH and INFISH as long-term strategies, all of which have since been addressed, including:

    - the lack of a formal process of subbasin review and prioritization (USDA Forest Service, Pacific Northwest Region 2005, revised 2008)
    - the lack of a comprehensive approach for analyzing and restoring watersheds (USDA Forest Service 1995)
    - incorporation of a comprehensive restoration strategy into forest plans (USDA Forest Service, Pacific Northwest Region 2008, 2016, these plans)
    - prioritization of watersheds for restoration (Malheur National Forest. 2005, Umatilla National Forest 2005, Wallowa-Whitman National Forest 2005, these plans)

    The Interior Columbia River Basin Project was intended as the process for developing the long-term strategy for replacing PACFISH. In lieu of finalizing the Interior Columbia River Basin Project and preparation of a record of decision for the project, the land management and regulatory agencies jointly agreed to implement the Interior Columbia

Basin Strategy by incorporating its science and elements of the strategy into revised forest plans. This agreement led to the development of the Aquatic and Riparian Conservation Strategy (ARCS), which is incorporated into the Blue Mountains Plans in the form of desired conditions, standards and guidelines, and objectives for achieving desired conditions, and contains the elements of the long-term strategy that were lacking in PACFISH and INFISH. The additional elements include the identification of key watersheds, prioritization of watersheds for restoration, the use of watershed analysis, and long-term monitoring of the effectiveness of the strategy. The first three elements were conducted in the preparation of the plans and the results are incorporated into the Plans and presented in the Blue Mountains ARCS (Appendix A to the Plans). A regionwide monitoring strategy to track the effectiveness of implementing PACFISH and INFISH was implemented in 2001 (Kershner et al. 2003, 2004) and continues to the present. Results of that monitoring are published annually. Forest-scale monitoring is included with this plan.

54. **Concern Statement:** The Forest Service should not use the Pacific Northwest Region's 2008 Aquatic and Riparian Conservation Strategy (ARCS) due to its overly large riparian buffer widths and limited scientific relevance to the drier terrain east of the Cascades. In addition, the ARCS has not undergone a public NEPA review or tribal consultation.

    Response: Based on our review of the science regarding riparian buffer widths, the riparian habitat conservation area widths in PACFISH, as modified for the regional and Blue Mountains ARCS (2008, 2018) are appropriate and protective of riparian functions as first described in FEMAT (1993). The development of the Environmental Impact Statement for the revised Forest Plans represents the NEPA environmental review of the regional ARCS (2008) and the Blue Mountains ARCS (2018). Tribal consultations regarding content of both strategies reflected in the revised plan alternatives have been ongoing.

    The five essential elements of both the regional (2008) and 2018 Blue Mountains ARCS consist of riparian management areas, key watersheds, watershed analysis, protection and restoration, and monitoring and adaptive management. These elements were incorporated into a suite of plan components for each of the action alternatives, by:

    - Setting goals and desired conditions [riparian management Areas, key watersheds, restoration],
    - Identifying suitable uses or activities that are or are not generally appropriate in certain management areas [riparian management areas, protection],
    - Describing anticipated outputs in the form of objectives that are a means to measure progress towards achieving or maintaining desired conditions [restoration, key watersheds],
    - Constraining activities with standards or guidelines that ensure protection of physical and biological resources [riparian management areas, key watersheds, watershed analysis],
    - Conducting monitoring and evaluation that will provide a basis for a periodic determination and evaluation of the effects of management practices [monitoring and adaptive management].

The five constituent elements of the regional ARCS (2008) were embedded in Plan components applicable to Alternatives B through F in Appendix A of the Final Environmental Impact Statement.

The Blue Mountains ARCS (2018) is based on the updated regional ARCS (2016) and has been adapted specifically to concerns in the Blue Mountains planning area through elements incorporated into plan components for the two additional alternatives, E-Modified and E-Modified Departure. Details of the plan components for alternatives E-Modified and E-Modified Departure are also provided in Appendix A of this document. In addition, the Blue Mountains ARCS is in Appendix A of the Revised Plans and provides Plan direction for use in implementation of the preferred alternative. Appendix A of the revised Plans contains full discussions of the science and rationales for Blue Mountains ARCS-derived Plan components and other direction.

Elements of the 2008 ARCS were disclosed and addressed in the Draft Environmental Impact Statement. The Blue Mountains Aquatic and Riparian Conservation Strategy is incorporated into Alternatives E-Modified and E-Modified Departure. The Biological Assessment and Biological Opinion constitute consultation on the 2018 Blue Mountains Aquatic and Riparian Conservation Strategy and the environmental effects of the strategy are addressed in Chapter 3 of the Final Environmental Impact Statement.

Climate Change

Climate Change: Aquatics

55. **Concern Statement:** The Forest Service should consider the impact of climate change on endangered fish species, for example changes in peak flow timing and lower summer flows as well as the potential for shifting distribution of bull trout and the increased importance of core habitat on national forestlands. In addition, the Forest Service should consider the synergistic effects of roads, grazing and logging, and climate change on aquatic resources.

    Response: Climate effects to threatened and endangered fish species, including expected changes in stream temperature and effects to bull trout are discussed in the "Aquatic Species" section of the Final Environmental Impact Statement. Changes in peak streamflow and summer low flows are described in the "Watershed Function, Water Quality, and Water Uses" section. The synergistic effects of forest management and climate change are discussed in both sections.

    The Watershed Function, Water Quality, and Water Uses section has been updated to describe changes in the hydrology of area streams, including peak flows and low flows. For example, the analysis displays that the timing of peak flows on the Grande Ronde River is strongly affected by the timing of rainfall. Four winter (December through February) peaks occurred between 1904 and 1950, while 13 winter peaks occurred after 1950 through 1989, the extent of the record for the gage at La Grande, Oregon. McIntosh et al. (1994) noted an apparent change in the date of annual peaks to one month earlier and attributed the change to a likely land use affect. The updated analysis notes that rain-driven floods account for a shift in peak flow timing of 20 days between 1904 and 1989. In addition, nearly all spring peaks on the Grande Ronde River after 1950 have occurred on days of measureable rainfall at La Grande, and that the timing of rainfall may account for all of the remaining difference in peak flow timing on the Grande Ronde River.

Climate Change: Assumptions

56. **Concern Statement:** The Forest Service should drop all references to climate change because the existence of climate change and any potential negative effects are too uncertain. Climate models have failed to predict actual temperature and are not reliable.

    Response: In 2010, the Forest Service provided specific direction to the National Forest System in the form of the National Roadmap for Responding to Climate Change (USDA FS 2010a) and the Performance Scorecard for Implementing the Forest Service Climate Change Strategy (USDA FS 2010b). The goal of the Forest Service climate change strategy is to "ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources" (USDA Forest Service 2010b). In the Blue Mountains, the strategy includes addressing climate change in our planning documents. Climate projections are currently based on multiple models and use the range of projected outcomes to bracket the expected range of future global temperatures. Using this method there is no climate scenario that predicts that future temperatures will be cooler (Halofsky and Peterson 2017) and all models used to assess future temperatures in the Pacific Northwest predict warmer temperatures by the end of the century of at least 0.9 degrees Fahrenheit in all seasons (Mote and Salathé 2010).

    The Third Oregon Climate Assessment (Dalton et al. 2017) notes that Oregon's mean temperature warmed by 2.2 degrees Fahrenheit per century during the period 1895-2015, that the Pacific Northwest warmed by between 1.1 and 1.5 degrees Fahrenheit between 1901 and 2012, that this change was largely due to increases in atmospheric greenhouse gases, and that the observed warming trend accelerated after 1970.

    Oregon's mean annual temperature is projected to increase by 2.1 to 10.7 degrees Fahrenheit by the 2080s (2070-2099 average) compared to the 1970-1999 average with the amount of warming largely dependent on the magnitude of future greenhouse gas emissions.

    Available data indicates that climate change is already impacting the hydrology of streams and rivers in the Pacific Northwest. Low flows in the driest years have become lower in recent decades (Luce and Holden 2009); mountain snow is melting earlier (Cayan et al. 2001, Mote 2006), winter snowpack has been declining (Mote 2003, Hamlet et al. 2005), and spring runoff is occurring earlier (Mote et al. 2005, Stewart et al. 2005, Hamlet et al. 2007). All of these changes are expected to intensify as temperature increases (Littell et al. 2011, Luce et al. 2014).

57. **Concern Statement:** The Forest Service should focus on the next 15 to 20 years, in which case climate change is irrelevant, as most of the predicted changes won't occur.

    Response: Refer to the response to the previous comment. Changes in hydrology, including winter snow accumulation, earlier snowmelt, earlier spring runoff, and lower low flows are already occurring (Hamlet et al 2005, Hamlet and Lettenmaier 2007, Cayan et al, 2001, Luce and Holden 2009). Increases in average temperature since 1900, and accelerated change since about 1970 are well documented and expected to continue. Earlier snowmelt and warmer spring temperatures have been associated with increased wildfire frequency and intensity (Westerling et al. 2006; Littell et al. 2009, 2010). The focus of this Forest Plan Revision is on the next 10-15 years, but all of the changes described in the response to the previous comment are expected to continue, if not accelerate.

58. **Concern Statement:** The Forest Service should clarify expected changes in precipitation and likely effects on forests.

    Response: Expected changes in precipitation are less certain than for temperature and this may be because the variables that influence precipitation in the Pacific Northwest are more complex. Warmer air can hold more water vapor, so one effect is intensification of hydrologic extremes, meaning that larger floods, but also more intense droughts, are possible (Huntington 2006, Karl et al. 2012, Salathé et al. 2014).

    Average precipitation in Oregon increased by 0.73 inches per century between 1895 and 2015 (Dalton et al. 2017), but high year-to-year variability is larger than the trend. Projected increases in precipitation are small (2 to 6 percent) and also vary with expected future greenhouse emissions. Recent increases in summer precipitation in the Blue Mountains are small and are likely to be outweighed by the effects of increased temperature on the water requirements of vegetation (Huntington 2008). Projections for Oregon are for increased precipitation in fall, winter, and spring, and decreased precipitation in summer (Dalton et al. 2017). Most commenters on this Forest Plan revision effort are aware that 2015 was one of the driest and warmest years on record, with low winter snowfall and extended above average temperatures in late summer, and record fire occurrence in the Blue Mountains. The Third Oregon Climate Assessment suggests that 2015 may represent "average" conditions by as early as 2050 if current trends continue (Dalton et al. 2017).

    Climate models used to assess future climate in the Pacific Northwest predict that some of the change will result from decreased frequency of low temperature extremes, but that temperatures are expected to be warmer in all seasons, with the largest increases in summer months. Climate models that predict the largest summer temperature increases also predict the largest declines in summer precipitation (Mote et al. 2013).

Climate Change: Carbon Sequestration

59. **Concern Statement:** The Forest Service should focus on cultivation of young trees to best support carbon sequestration. Older, low- productivity and dying trees should be harvested.

    Response: Forest scientists have shown that large, old trees do not act simply as senescent carbon reservoirs but, along with smaller and mid-sized trees, they also actively fix large amounts of carbon. For example, at the extreme, a single big tree can add the same amount of carbon to the forest within a year as is contained in an entire mid-sized tree (Stephenson, et al. 2014.) Managing wildfire-prone forests that have naturally evolved within a frequent fire regime for carbon sequestration is complex. Large trees and old trees offer more than carbon sequestration; they are an essential habitat component for a myriad of species and play a critical role in the proper ecological function of fire-adapted forests. The Forest Service believes that managing for climate mitigation, as well as other benefits, is best approached at scales and perspectives larger than individual stands or trees.

    The Forest Service's desired conditions are informed in part by a need to use carbon sequestration as a potential climate change mitigation benefit. The goals and desired conditions of the Plans must also address a myriad of other essential ecosystem services. Forest management activities and strategies over the life of the Plans will be guided largely by the desired conditions. The desired conditions pertaining to forest vegetation are based on moving closer to an overall forest environment that is consistent with the

natural range of variability. These conditions would incorporate an ecologically sustainable mix of age classes, tree sizes, structural stages, and species. The Forest Service believes that restoring and maintaining landscapes within this natural range of variation represents our best chance to balance potential conflicts between ecosystem services, including climate mitigation, while maintaining ecological integrity and sustainability over time. Ensuring the long-term sustainability of the forests is critical to meeting both the present and future needs of forest-dependent local communities.

60. **Concern Statement:** To protect carbon stores, the Forest Service should log less, protect mature and old growth forests, adopt longer rotations, retain more trees when harvesting, tolerate denser forests, and avoid soil disturbance. The Forest Service should incorporate a plan, including standards and guidelines, to increase carbon storage in the Blue Mountains. Each management scenario should be compared to the natural rate of carbon accumulation.

    Response: As discussed above, we recognize that old trees and mature forests play an important role in providing carbon storage, as well as providing other desired ecosystem characteristics. However, the Forest Service believes that the complexity of managing fire-adapted forest ecosystems, which have naturally evolved within a frequent fire regime, is best approached at scales and perspectives larger than individual stands or trees. Managing for climate mitigation and ecosystem services like carbon storage will be best served by restoring and maintaining diverse and resilient forest conditions within their natural range of variation at the landscape scale. The Forest Service's strategy will not attempt to maintain forest ecosystems in an unstable and unnaturally dense condition. These conditions would not be sustainable and would threaten other desired ecosystem services. Promoting unnaturally high levels of dense forest conditions would only lead to future releases of large amounts of stored carbon as natural disturbance agents like wildfire and insect and disease outbreaks would inevitably affect the areas and produce massive tree die-offs. Working toward the Plan's desired conditions for forest vegetation would promote an ecologically sustainable mix of all age classes, tree sizes, structural stages, and species. In many, but not all areas, this will mean reducing existing stand densities and concentrating tree-based carbon within large, mature, fire-resistant individuals.

61. **Concern Statement:** The Forest Service should clarify how the increased emphasis on prescribed fire will affect carbon storage.

    Response: The Forest Plans do not necessarily call for an increased emphasis on prescribed fire. The role of wildland fire, both planned and unplanned, is currently recognized to be extremely important. It is expected to continue to play a critical role. Carbon sequestration and dynamics within frequent fire forest ecosystems is affected by many factors including wildfire and management activities. Wildfire acting on the altered forest conditions that are presently typical within much of the Blue Mountains represents a significant risk to the ability of these forests to sustainably store carbon. Prescribed burning is one tool that can be used to reduce the potential carbon emissions associated with severe wildfires. Properly designed and implemented prescribed fires consume less biomass and therefore release less carbon to the atmosphere than severe wildfires (Wiedinmyer and Hurteau 2010; Dore et al. 2010). The prescribed burns can be designed and implemented to reduce stand densities and support the development of low-density structures and large, mature, fire resistant trees. These stand characteristics reduce the risk of severe post-wildfire mortality and the resulting large carbon emissions.

62. **Concern Statement:** The Forest Service should note that removing merchantable material leads to carbon storage in wood products.

    Response: The Forest Service appreciates the role forest products play in storing carbon. In the U.S., forest products are stored in two major forest product "pools," products that are in use, and those held in landfills. Current additions of carbon to these pools from trees harvested in the U.S. are greater than decomposition losses from these pools, so carbon stored in these pools is increasing over time (Ryan et al. 2010). Forest products also play a role in carbon dynamics when they are used in place of more energy intensive materials like plastic, metal, and concrete. Carbon emissions are reduced because forest products require less amounts of fossil fuels to produce than many other substitute materials.

63. **Concern Statement:** The Forest Service should not endorse biomass utilization for energy in the forest plans because it isn't climate neutral.

    Response: Carbon neutrality is not necessarily a desired condition incorporated into the Forest Plans. The use of forest biomass energy reduces carbon emissions that would otherwise be released from fossil fuel use. Energy produced from fossil fuels releases carbon into the atmosphere that had been stored within the earth for millions of years. While not carbon neutral, biomass energy is a renewable source that is largely fueled from recycling carbon that is already within the atmosphere. It uses far less of the carbon stored within the earth than the production and consumption of fossil fuels. The overall desired conditions for the forest ecosystem support managing for climate mitigation and ecosystem services like carbon storage by restoring and maintaining diverse and resilient forest conditions within their natural range of variation at the landscape scale. In the dry upland and mixed conifer forests of the Blue Mountains, biomass utilization technology can help support many of the kinds of treatments that are necessary to implement climate adaptation strategies and restore more resilient forest conditions.

64. **Concern Statement:** The Forest Service should not claim that the desired landscape will provide a better contribution to carbon storage because only a small fraction of the treated areas will actually experience fire or insects. The loss of carbon from logging would be greater than emissions from fire and insects alone.

    Response: The opinion that wildfire and insect disturbances only potentially affect a small portion of the forest landscape is not supported by the best available science information. Disturbances play a very large role in forest ecosystem carbon dynamics. All of the national forests of the Blue Mountains have evolved within an environment that has been, and will continue to be heavily influenced by the occurrence of natural disturbances like wildfire and outbreaks of native insects. The Forest Service's management strategies do not attempt to predict precisely where and when these disturbance forces will occur. Rather, management objectives are based on the assumption that natural disturbance forces will inevitably return to all of the area, so management attempts to proactively alter the conditions that disturbances agents like fire will encounter when they do return.

    Most of the forests of the Blue Mountains have naturally evolved alongside wildfire within a frequent fire occurrence regime. The complexity of managing these kinds of forests for carbon storage, along with other desired ecosystem services, must consider the current altered condition of the forest within the context of probability of natural wildfire occurrence. Given these considerations, the two disturbance agents that are most likely to next affect the dry upland and mixed conifer forests that dominate the Blue Mountains

are either wildfire, or managed activities like thinning, harvesting, or prescribed fire. Several forest scientists studying these particular issues have found that high severity fire has a larger impact on ecosystem carbon uptake and storage than thinning activities or prescribed fire. In wildfire prone forests, overall tree-based carbon stocks will be best protected by management treatments that produce low-density structure dominated by large, mature, fire-resistant species (Hurteau and North 2008; Dore et al. 2010; Wiedinmyer and Hurteau 2010; Schaedel et al. 2017).

Climate Change: Ecological Resilience

65. **Concern Statement:** The Forest Service should offer an accurate baseline of conditions that includes monitoring and forecasting of climate change over the life of the plan.

    Response: The historical baseline used in the climate literature varies. The Third Oregon Climate Assessment (Dalton et al. 2017) uses the period 1970-1999, while papers cited in Halofsky and Peterson appear to have used different base periods. The Forest Service is likely to rely on climate forecasts from scientists of the Climate Impacts Group at the University of Washington, the Oregon Climate Change Research Institute at Oregon State University, national assessments, and the work of Forest Service research scientists involved in climate change. Forecasts are currently developed for different future time periods. Most commonly these include the 2030s (2020-2039 average), 2050s (2040-2059 average) and 2080s (2070-2099 average).

66. **Concern Statement:** The Forest Service should incorporate climate change adaptation in its desired future conditions. The Forest Service should support climate adaptation by limiting stressors, for example by reducing road density, enlarging culverts, reducing livestock grazing, protecting refugia at different elevations and adjacent buffer areas, conserving biodiversity, improving landscape connectivity, and restoring natural disturbance regimes.

    Response: The desired conditions of the Forest Plans have been informed by, and are consistent with many of the climate adaptation strategies that are being called for in this region of the west. Many of the forest management activities that will be used to move toward our desired conditions also have a recognized role as part of a climate change adaptation strategy (Peterson et al. 2011; Halofsky and Peterson 2016). For example, using a full suite of management options including mechanical thinning and prescribed burning will facilitate the creation of a forest mosaic of different age-classes, species, and structures across the three National Forests. This mitigates risk and serves as an adaptation strategy that will also provide functional diversity and a range of habitats at large spatial and temporal scales. These conditions will increase resilience to stressors and ensure that forests are sustainable and remain available to store sustainable levels of carbon over the long term.

67. **Concern Statement:** The Forest Service should address the potential conflict between climate change mitigation and climate change adaptation, including the role of mortality in supporting forest adaptation.

    Response: The Forest Service believes that the best balance between the goals of climate mitigation via increased carbon storage, versus adapting forest conditions to anticipated climatic conditions is achieved by restoring and maintaining resilient forest conditions within their natural range of variability. Attempting to maintain forest ecosystems in an unstable and unnaturally dense condition as a way to store additional carbon would not be sustainable, and would also neglect other desired ecosystem services. These conditions

would lead to future releases of large amounts of stored carbon, as natural disturbance agents like wildfire and insect and disease outbreaks inevitably return and produce severe die-offs of trees. Many forest scientists studying these particular issues have found that high-severity fire has a larger impact on ecosystem carbon uptake and storage than thinning or prescribed fire activities. In wildfire-prone forests, overall tree-based carbon stocks will be best protected by management treatments that produce low-density structure dominated by large, mature fire resistant species (Hurteau & North 2008; Dore et al. 2010; Wiedinmyer and Hurteau 2010; Schaedel et al. 2017).

Many of the forest management activities that will be used to move toward our desired conditions also have a recognized role as part of a climate change adaptation strategy (Peterson et al. 2011; Halofsky and Peterson 2016). For example, using a full suite of management options including mechanical thinning and prescribed burning will facilitate the creation of a forest mosaic of different age-classes, species and structures across the three National Forests. This serves as an adaptation strategy that will provide functional diversity and a range of habitats at large spatial and temporal scales. These conditions will also increase resilience to stressors and ensure that forests remain available to store sustainable levels of carbon over the long term.

68. **Concern Statement:** The Forest Service should consider the predicted longer and drier fire season and factor this into desired conditions.

    Response: Historical reference conditions remain useful to guide management because historically forests were quite resilient to the same disturbance agents and forces that are predicted to increase under many climate change scenarios, namely drought, insects, pathogens, and wildfire. The Forest Service has considered the argument that conditions reflective of the pre-settlement era should no longer be used as a reference baseline because future conditions could be much warmer and drier due to climate change. However, given the enormous degree of uncertainty associated with the magnitude, timing, scale, and spatial extent of anticipated climate change impacts, we find that the historical range of variability approach is warranted and remains useful. There is considerably less uncertainty associated with historical range of variability, compared to any simulated predictions for the future. Further, it seems very unlikely that using historical range of variability to inform desired conditions for forest vegetation and to guide management efforts will result in inappropriate activities within the near and mid-term time frames of the next plan period. There are broad ranges of conditions depicted by the historical range of variability that would allow considerable flexibility in future management choices. More discussion regarding historical range of variability and anticipated climate change effects can be found throughout the analysis in the Final Environmental Impact Statement.

69. **Concern Statement:** The Forest Service should include in its analysis the potential change in plant water use efficiency due to climate change.

    Response: The commenter is referred to articles by Thomas Huntington on the topic (Huntington 2004, 2006, 2008, 2010). Increased atmospheric carbon dioxide affects the water requirements of vegetation but the effect varies with temperature and is expected to eventually be outweighed by increased temperature (Perry et al. 2013). Research supports that higher concentrations of carbon dioxide in the atmosphere reduce the water requirements of forest vegetation. This effect needs to be tempered against the effect of earlier warming in spring, higher temperatures in all seasons, and lower summer precipitation. The effects of increased temperatures will be exacerbated by earlier

snowmelt and a higher percentage of precipitation falling as rain rather than snow, resulting in an extended summer dry season and increased drought stress to terrestrial vegetation, and possible riparian vegetation as well. There may be a near-term increase in water use efficiency, but the benefit to forest vegetation is diminished, and there are already cases where drought stress is increasing tree mortality from the effects of drought (McKenzie et al. 2008, Breshears et al. 2005, 2009) and changes in disturbance regimes resulting from increased temperatures (Vose et al. 2012, Adams et al. 2011).

Climate Change: Monitoring and Adaptive Management

70. **Concern Statement:** The Forest Service should develop a plan that allows local land managers to collaboratively adapt to changing conditions.

    Response: One feature brought forth from the 2012 Planning Rule is the ability to have a monitoring program in each of the Plans for the three National Forests. The purpose of monitoring and evaluation is to ensure that management direction is being carried out, and that the outputs and schedules are being achieved. Monitoring allows responsible officials to test assumptions, track changing conditions, measure management implementation and effectiveness in achieving desired outcomes, and feed new information back to inform adaptive management. The key role that monitoring serves in adaptive management is that it provides the opportunity for facilitated learning to measure progress toward desired conditions and objectives of the land management plan as well as measuring effectiveness of plan components.

71. **Concern Statement:** The Forest Service should incorporate monitoring questions directed at climate concerns and uncertainties, collect needed data, and add a mechanism for evaluating and modifying management strategies (annually and more formally every five years) as well as benchmarks or triggers for management actions.

    Response: The Forest Service uses best available science in determining monitoring measures. Appendix A of the Environmental Impact Statement outlines monitoring questions, their link to direction, and measures for answering the questions. Changes have been made in the Final Environmental Impact Statement to improve the monitoring, with some revised questions, updated measures, incorporation of links to the direction, frequency of measurement, precision and reliability, and the time when evaluation will be reported. The monitoring program described in Appendix A meets all monitoring and evaluation requirements under the 2012 planning regulations.

72. **Concern Statement:** The Forest Service should include a risk assessment to characterize vulnerability, informed by the Blue Mountain Adaptation Partnership Vulnerability Assessment, in order to address climate change. The National Roadmap for Responding to Climate Change (44 Fed. Reg. at 26609) identifies an adaptation dimension to assess vulnerability, set priorities and monitor change.

    Response: The purposes of conducting the Blue Mountains vulnerability assessment were to identify risks to different resources and to incorporate that information into the Forest Plans and Final Environmental Impact Statement. This has been done to differing degrees, depending on the alternative, resource, and the nature of vulnerability to climate change.

Cultural[37]

Cultural: Analysis

73. **Concern Statement:** The Forest Service should consider Native American and traditional local knowledge in addition to academic science.

    Response: We agree that forest planning and management should include a broad range of scientific information based on best available science and traditional and cultural knowledge based systems. The revised Forest Plans recognize the need for these expanded science-based views and contributions and include additional language for each listed goal stating that resources "will be managed using traditional ecological and cultural knowledge and best available science." These systems, combined with ongoing planning and project-level coordination and collaboration will support forest decision-making processes and contribute to ecological, social, and economic sustainability. Traditional knowledge is considered through public and Tribal participation and ongoing government-to-government consultation.

74. **Concern Statement:** The Forest Service should use a broader definition of cultural resources as encouraged by NEPA. The Forest Service should better identify traditional cultural properties and places in its existing condition description and should include new measures of cultural values to better represent the full spectrum of local cultural values communities.

    Response: We have expanded the definition for Historic Properties in Section 2.5 Cultural Resources in both the "Background" and "Desired Conditions" sections of the Plans to include "properties of traditional religious and cultural importance to American Indian Tribes" as described in the National Historic Preservation Act, as amended. The expanded definition continues to recognize prehistoric, historic, or traditional cultural property site-type categorizations. Similarly, the definition of traditional cultural properties was refined in section 2.5 Cultural Resources and states "Traditional cultural properties, cultural landscapes, sacred sites, and other culturally significant areas and resources identified by Tribes and local communities provide tangible links to historically rooted beliefs, customs, and practices." The enhanced definitions and desired condition plan components provide additional clarification and will better inform project-level planning and implementation to consider these cultural resource types in the planning process.

75. **Concern Statement:** The Forest Service should reconsider its method for evaluating priority heritage assets, particularly on the Wallowa-Whitman National Forest.

    Response: Priority Heritage Assess evaluations are a function of the Heritage Program Managed to Standard program outlined in Forest Service Manual 2360 (FSM 2360). The Forest Service defines Priority Heritage Assets as "those assets of distinct pubic value that are or should be actively maintained and meet one of more of the following criteria:" (FSM 2360.5)

    a. The significance and management priority of the property is recognized through an official designation such as listing on the National Register of Historic Places or on a State register.

[37] Includes cultural topics related to wildlife and other categories

b. The significance and management priority of the property is recognized through prior investment in preservation, interpretation, and use.

c. The significance and management priority of the property is recognized in an agency-approved management plan.

d. 4The property exhibits critical deferred maintenance needs and those needs have been documented. Critical deferred maintenance is defined as a potential health or safety risk or imminent threat of loss of significant resource values.

The areas that are specifically managed to protect cultural resources are allocated to Management Area 2E – Historical Areas. Six historical areas totaling 2,300 acres have been included in Management Area 2E for Alternative E-Modified for the Wallowa-Whitman National Forest. Cultural resources in other locations are protected through existing laws, regulations, policies, and existing agreements with the Oregon and Washington State Historic Preservation Offices.

76. **Concern Statement:** The Forest Service should assess the Nez Perce National Historic Trail as a congressionally designated trail as well as the associated auto tour routes and recreational facilities. The Oregon Trail should also be considered in the discussion of historic properties.

Response: The revised Forest Plans have included additional background information on both the Oregon Trail National Historic Trail and the Nez Perce National Historic Trail under Management Area 2G – Nationally Designated Trails located in Part 2, Strategy. These descriptions provided necessary background and describe the resource's national significance, which lead to their designation in the National Trails System. Background information also recognizes multi-agency management and cooperative efforts by federal and state agencies, land owners, and private organizations to steward these nationally significant resources.

To ensure these resources are preserved, two additional standards were developed that provide additional management direction and protection:

MA2G-1S The Nez Perce National Historic Trail shall be managed consistently with the guidance in the Nez Perce National Historic Trail Comprehensive Management Plan (USDA Forest Service et al. 1990).

MA2G-2S The Nez Perce National Historic Trail shall be managed as a nonmotorized route for primitive hiking and horseback riding for trail segments that are not identified as auto tour routes.

Cultural: Managing Cultural Resources

77. **Concern Statement:** The Forest Service should work with the Tribes to identify properties of cultural and religious significance and areas that will be managed specifically to protect cultural resources.

Response: The areas that are specifically managed to protect cultural resources are allocated to Management Area 2E – Historical Areas. Cultural resources in other locations are protected through existing laws, regulations, policies, and existing agreements with the Oregon and Washington State Historic Preservation Offices. In addition, the desired condition for Goal 2.5 – Cultural Resources, was modified and states, "Significant prehistoric and historic sites, traditional cultural properties, and properties of traditional religious and cultural importance to American Indian Tribes are

identified and protected." Identifying these locations includes consultation with the affected tribes, and while many of these efforts will be completed at site-specific and project-level analysis, site and resource identification processes may be developed outside of the forest planning process and subsequent project-level analysis.

78. **Concern Statement:** The Forest Service should consider designating routes used by Indians during the Bannock-Paiute War of 1878 as a National Historic Trail System. Special designation to protect burial sites and battlegrounds should also be considered.

    Response: Reviewing and recommending National Historic Trails for inclusion in the National Trails System is not conducted as part of the Forest Plan revision process. As stated in the National Trails System Act (Public Law 90-543, as amended through Public Law 111-11), the process for designating trails or authorizing additional studies is outlined in Section 5 (b): "The Secretary of the Interior, through the agency most likely to administer such trail, and the Secretary of Agriculture where lands administered by him are involved, shall make such additional studies as are herein or may hereafter be authorized by the Congress for the purpose of determining the feasibility and desirability of designating other trails as national scenic or national historic trails." Further detail and criteria are outlined in section 5 (b) (1-11). Important features associated with a National Historic Trail are generally included within the broader trail designation and are included in the associated trail management plan.

79. **Concern Statement:** The Forest Service should establish a management area and standards and guidelines for historic trails, including the Nez Perce National Historic Trail.

    Response: Management Area 2G – Nationally Designated Trails includes those trail that are included in the National Trails System as established by the National Trails System Act (Public Law 90-543, as amended through Public Law 111-11). Additional background information describing the Nez Perce National Historic Trail was included in the Management Area 2G discussion. Two additional Standards were developed specifically for the Nez Perce National Historic Trail and state:

    MA2G-1S The Nez Perce National Historic Trail shall be managed consistently with the guidance in the Nez Perce National Historic Trail Comprehensive Management Plan (USDA Forest Service et al. 1990).

    MA2G-2S The Nez Perce National Historic Trail shall be managed as a nonmotorized route for primitive hiking and horseback riding for trail segments that are not identified as auto tour routes.

80. **Concern Statement:** The Forest Service should provide for traditional cultural uses by local communities, including visiting scenic areas, hunting, fishing, camping, access to motorized and nonmotorized trails, and other opportunities to connect with nature.

    Response: The revised Forest Plans promote sustainable recreation uses of the forests through stated goals, desired conditions, and other plan components. Goal 2: Promote Social Well-Being provides a firm planning foundation to encourage recreational uses while conserving the natural resources that form the resilient and diverse ecological conditions that attract recreational users to the national forests. Subsections within Goal 2 include scenery (2.1), recreation (2.2) that includes developed recreation, dispersed recreation, and backcountry recreation, hunting and fishing (2.3), and road and trails access (2.5) among others. Traditional cultural properties are discussed in Goal 2.4

(Cultural Resources) and are emphasized in the desired condition along with other cultural resource types. Further direction for identifying and evaluating traditional cultural properties can be found in National Register Bulletin 38 entitled Guidelines for Evaluating and Documenting Traditional Cultural Properties (Parker and King 1990; Revised 1992; 1998).

Cultural: Tribal Consultation

81. **Concern Statement:** The Forest Service should meet with Tribal technical staff to better understand Tribal issues and priority rights.

    Response: Throughout the planning process, the Forest Service has engaged Tribal organizations in order to develop a better understanding of Tribal interests and rights, and to develop specific plan content that is responsive to these interests. Chapter 4 of the Final Environmental Impact Statement outlines these communications, noting that detailed Forest Service communications with the Tribes are available in the planning record and include official correspondence letters and meeting notes from the numerous government-to-government and staff-to-staff meetings. The revised Forest Plans are responsive to the Tribes' input and consideration, and the Forest Service will continue working closely with American Indian Tribes to fulfill our trust responsibility and to better protect and conserve ecological and cultural resources that are central to the Tribes' traditions

82. **Concern Statement:** The Forest Service should modify cultural resource guideline CUL-1 to require consultation and concurrence with the affected Indian Tribe(s).

    Response: We agree that affected Indian Tribes be included in all consultation efforts. Based on this comment and other recommendations, we have changed the cultural resources guideline to a standard and included the appropriate consultation language. The standard now states:

    CR-1S Prehistoric, historic, and traditional cultural properties shall be protected unless an exemption is specified in a programmatic agreement or a project specific mitigation plan is developed in consultation with the appropriate State Historic Preservation Officer and affected Indian Tribe(s).

83. **Concern Statement:** The Forest Plans should include goals and objectives for government-to-government consultation with the Tribes.

    Response: The revised Forest Plans contain a section that focuses on Tribal coordination and consultation. The section, entitled "Federal Trust Responsibilities and Tribal Rights and Interests" is located in the revised Forest Plans under Part 2 – Strategy, Management Focus. The intent of this section is to highlight the Forest Service's unique legal responsibility to American Indian Tribal governments as set forth in the Constitution of the United States (Article VI, Clause 2), treaties, statutes, Executive Orders, and court decisions. This section further emphasizes the unique identity that each Tribe maintains, the different authorities each Tribe possesses, and the importance of maintaining access for Tribes to culturally significant sites, to use and possess sacred objects, to protect their ancestral graves, archaeological sites, and cultural sites, the freedom of worship through ceremonial and traditional practices, and to collect native plant and animal resources for traditional cultural purposes. The regulatory framework outlined in this section identifies consultation requirements that the forests uses for both forest planning and for project-

level analysis and decisionmaking, and underscores the priority to consult with tribes whenever proposed policies or management actions may affect their interests.

Cultural: Tribal Role-Desired Conditions

84. **Concern Statement:** The Forest Service should modify the desired conditions for cultural resources to better incorporate Tribal interest in the management of cultural resources. Desired conditions should address protection and restoration of fish, wildlife, native plant resources, and open space.

    Response: The desired condition for Goal 2.8 - Tribal Rights and Interests was improved to recognize the importance and priority of consultation with the Tribes for actions that include not only cultural resource identification, protection, and management, but also consultation "to protect those rights and interests and to identify and manage areas and resources of tribal importance on National Forest lands." Additionally, each goal was modified to recognize the interrelated importance of ecological, social and economic well-being to Tribal identity and cultures.

Cultural: Tribal Role-Treaty Rights

85. **Concern Statement:** The Forest Service should include a standard in the Forest Plans to ensure management activities are coordinated with Tribes to meet laws, regulations and term of Indian treaties.

    Response: The revised Forest Plans provide programmatic direction for the future planning and project-level decision making on the national forests. The Forest Plans do not change the Forest Service's legal requirements outlined in existing regulatory framework including the Constitution of the United States (Article VI, Clause 2), treaties, statutes, Executive Orders, and court decisions. Additionally, the national forests must follow existing direction as set forth in the Forest Service Directive System comprised of the Forest Service Manual and Handbooks. In response to this comment and others, an additional standard was developed for the revised Forest Plans regarding American Indian Tribal government consultation that states:

    TRAI-1S The Forests shall use consultation processes established with American Indian Tribal governments to identify and manage areas and resources of tribal importance on national forest lands.

86. **Concern Statement:** The Forest Service should reference all relevant Indian treaties in plan revision documents, especially in the Legal Framework section and Appendix D sections titled "Tribal and Treaty Resources" and "Heritage Program." Currently vague references to Tribal histories and treaty rights should be replaced with separate and specific references for each Tribe and associated treaties.

    Response: We added a specific reference/citation for each of the Tribes' treaties associated with the planning area in the "Federal Trust Responsibilities and Tribal Rights and Interests" section in the Forest Plans. The statement, including these specific statutory references, states: "A significant portion of lands ceded (by virtue of multiple Treaties of 1855) by the Confederated Tribes of the Umatilla Indian Reservation (12 Stat. 945), Confederated Tribes of Warm Springs (12 Stat. 963), Nez Perce Tribe (12 Stat. 957), and Confederated Tribes and Bands of the Yakama Indian Nation of the Yakama Reservation (12 Stat. 951) were established as part of the National Forest System by the Organic Administration Act of June 4, 1897." These statutes are also listed in Appendix B

(Laws and Regulations Relevant to Forest Planning) in the Final Environmental Impact Statement.

87. **Concern Statement:** The Forest Service should add a reference to the Religious Freedom Restoration Act to supplement the existing American Indian Religious Freedom Act reference in Appendix D.

    Response: The Religious Freedom Restoration Act of 1993 has been added to the list of laws and regulations in Appendix B (formerly Appendix D) of the Final Environmental Impact Statement.

88. **Concern Statement:** The Forest Service should more fully address Tribal access for treaty-reserved purposes in the desired conditions for road and trail access.

    Response: The desired condition for Goal 2.5 – Roads and Trails was modified and states, "The need for Tribal access for treaty reserved rights is acknowledged and supported." The modification better reflects the Forest Service's existing legal requirements and trust responsibilities. The modified desired condition also parallels similar revised Forest Plan guidance under the Federal Trust Responsibilities and Tribal Rights and Interests section that acknowledges "the importance of maintaining access for Tribes to culturally significant sites, to use and possess sacred objects, to protect their ancestral graves, archaeological sites, and cultural sites, the freedom of worship through ceremonial and traditional practices, and to collect native plant and animal resources for traditional cultural purposes."

89. **Concern Statement:** The Forest Service should protect, restore and enhance fish, wildlife and native plant resources in accordance with the Treaty while also allowing for Tribal access to such resources. In addition, the Forest Service should support its conclusion that all alternatives provide adequate protection for habitat and watershed conditions. Plan components should encourage management actions that maintain or increase open space.

    Response: Through implementation, the revised Forest Plans strive to achieve a set of integrated ecological, social, and economic goals and desired conditions that will contribute to a broader range of sustainable and resilient ecosystems now and in the future. The Forest Plans recognize that wildlife habitat, watersheds and aquatic habitat, fire-adapted ecosystem, climate change, and social and economic expectations predominate these interrelated systems. Forest Plan components were developed in light of the need for change and focus on restoring and maintaining terrestrial vegetation conditions, restoring and maintaining watershed conditions, and contributing to social and economic stability. These combined Forest Plan elements will contribute to restoring and maintaining resilient ecosystems and contribute to upholding the Forest Service's trust responsibility to conserve and steward these resources for Tribal treaty-reserved rights and interests.

    Each of the respective resources sections for wildlife habitat and watershed conditions are documented in the Final Environmental Impact Statement and supporting documentation and include appropriate indicators and metrics that support associated forest plan components.

    As noted in a previous response, both Goal 2.5 – Roads and Trails Access and the Management Focus section entitled Federal Trust Responsibilities and Tribal Rights and Interests include necessary management direction that supports and acknowledges the

need for continued access to national forest lands for Tribal members to exercise their treaty-reserved rights.

90. **Concern Statement:** The Forest Service should recognize that the Fort Bridger Treaty invalidates fees for campgrounds or access for members of the Shoshone-Bannock Tribes. In addition, the Forest Service should include language that recognizes the Shoshone-Bannock Tribes' rights to subsistence uses on lands within the planning area.

    Response: The revised Forest Plans do not invalidate existing rights, agreements, and special use authorizations. As these documents are renewed or reauthorized, they will need to comply with the revised Forest Plans. The Forest Plans provide ample direction to support continuing agreements with Tribal governments, and they do not contradict the 1990s Forest Plans with regards to Tribal rights and interests. The Forest Plans similarly recognize, support, and acknowledge the ongoing access needs to national forest lands for Tribal member to exercise treaty-reserved rights.

Cultural: Wildlife and Plants

91. **Concern Statement:** The Forest Service should focus on providing year-round elk security habitat to provide year-round hunting opportunities for Tribes.

    Response: In response to public comments on the Draft Environmental Impact Statement, additional Forest Plan components including desired conditions, standards, guidelines, and objectives were developed to address elk security needs. These combined plan components provide holistic management direction that encourages elk use of National Forest System lands, preserves elk security, and improves distribution of elk across all seasonal ranges within the planning area. Planning components further inform future site-specific planning and analysis to consider elk security, elk forage and nutrition, elk hiding cover, and elk habitat selection and distribution. In coordination with the Oregon Department of Fish and Wildlife, the Washington Department of Fish and Wildlife, and Tribal biologists, areas were identified that are best suited for improving elk distribution by creating additional elk security. These combined Forest Plan components, and the collaborative intergovernmental planning efforts to develop them, are responsive to Tribal members' needs to exercise treaty-reserved rights to hunt on "open and unclaimed lands."

92. **Concern Statement:** The Forest Service should create wildlife corridors and minimize General Forest land allocations to maintain Tribal wildlife resources.

    Response: The Final Environmental Impact Statement analyzes a range of alternatives including a range of management area allocations. Some alternatives allocate acres to Management Area 3C - Wildlife Corridor while others do not. The effects analysis in Chapter 3 describes how each alternative contributes to the connectivity of habitats for various wildlife species. Areas where most types of active management are generally not suitable will provide varying amounts of wildlife habitat connectivity. Riparian management areas also function as wildlife corridors for some species. Forest Plan components provide management direction for wildlife connectivity in Goal 1.12 - Landscape Patterns, and future site specific and planning analysis will implement wildlife connectivity/corridors and manage open motor vehicle routes at the project level as appropriate.

    (See also concern statements under "Wildlife," especially "Wildlife: Standards and Guidelines")

Energy

Energy: Generation and Transmission

93. **Concern Statement:** The Forest Plan should include standards and guidelines that streamline power generation and transmission and not preclude use of existing corridors. To support energy projects, the Forest Service should allow hazard trees and snags to be cut in existing right-of-ways.

    Response: Use of existing corridors is generally preferred, but can depend on corridor characteristics, the resources affected, and the nature of a proposed use. Utility corridors are managed under the terms of special use authorizations in which removal of hazard trees may or may not be allowed, depending on the terms of the authorization. The proposed guideline allows for the temporary offsite storage of hazard trees removed for safety reasons.

Energy: Suitability

94. **Concern Statement:** The Forest Service should make wind energy an unsuitable use on National Forest lands within the Blue Mountains. Wind development restricts use of forest by the public and would require trade-offs unsuited to the Forest Service's multiple-use responsibilities, for instance impacting hunting as well as other recreation opportunities. Wind developments detract from the beauty of national forests and impact viewsheds. Windmill lights are visible for many miles and could affect designated scenic or wilderness areas. Wind developments negatively impact birds, bats and other wildlife; increase the spread of invasive plants; cause erosion and habitat fragmentation and degradation; and increase the potential for species to become federally listed as threatened or endangered. Finally, wind power is inefficient, unreliable, and would require road and infrastructure development as well as high voltage power lines that would increase fire risk.

    Response: The Energy Policy Act of 2005 (sec. 201) considers the use and occupancy of National Forest System lands for renewable energy development appropriate and contributes to the energy needs of the United States. The Act further requires the evaluation of renewable energy potential on Federal lands, including wind, solar, and geothermal energy. The Draft Environmental Impact Statement displayed a total of 388,000 acres of National Forest System lands as having potential for wind energy development. This estimate is revised in the Final Environmental Impact Statement to include acres of General Forest (MA 4A) with sufficient wind potential for commercial development, resulting in a revised estimate of 39,840 acres with wind energy potential (2,100 acres on the Malheur National Forest; 22,500 acres on the Umatilla National Forest; and 15,240 acres on the Wallowa-Whitman National Forest). A nationwide assessment of wind energy potential in each National Forest (NREL and USDA-FS 2005) indicated a nearly identical total of 39,420 acres with potential for wind energy development on National Forests in the Blue Mountains, although the acres on each national forest vary from the analysis in the Environmental Impact Statement.

    No projects are currently proposed and none can be authorized without an analysis of the environmental effects of a specific proposal and issuance of a special use permit or authorization. Project-level analysis would follow the procedures described in the Forest Service Special Uses Handbook for Wind Energy (FSH 2709.11 Chapter 70) which has specific requirements screening criteria, siting considerations, and consideration of the

effects to recreation, scenery, public access, cultural resources, and species of management concern. The suitability and/or feasibility of wind energy development at a particular site can only be determined through a project-level analysis of a specific site, or group of sites.

95. **Concern Statement:** The Forest Service should not allow wind development because it isn't in the public interest and should be located on private land rather than public land. This would avoid the problem of mothballed windmills on the national forest landscape after their useful lifespan.

    Response: The Energy Policy Act of 2005 considers the development of renewable energy resources on Federal lands to be appropriate and in the public interest by contributing to the energy needs of the United States. See the previous response for more information.

96. **Concern Statement:** The Forest Service should require wind developers to install nets to protect birds.

    Response: The primary method for protecting birds, bats, and other wildlife will revolve around proper siting of the wind turbines. According to FSH 2709.11 Special Uses Handbook Chapter 70, nesting grounds, migration corridors, habitat, security areas, and critical range of species of management concern should all be avoided when choosing a siting location along with any protected areas or areas where ecological resources are known to be sensitive to human activities. Examples of these areas include wetlands, riparian zones, streams, lakes, bogs, or fens; globally unique, rare or threatened ecosystems; critical habitat of wildlife protected under Federal or State law; nests of hawks, eagle, falcons, and owls; and prairie or shrub-steppe grouse breeding grounds. Other areas to be avoided include areas where topographical and landscape features may funnel nocturnal migrants, such as over mountain passes, along river corridors, or ridge tops and areas with a high incidence of mist or fog if existing information indicates a high risk to migratory birds or bats during these weather events. Additional needs may be identified during the environmental analysis for individual projects.

Forest Management

Forest Management: Biomass

97. **Concern Statement:** The Forest Service should retain biomass to protect the long-term health of the forest and only utilize biomass for small-scale, local operations.

    Response: A Forest Plan provides programmatic guidance. It provides the basis for subsequent site-specific, project-level decisions to be made, but the specific types of timber sales and what products to include in them during the new planning period are decisions that would be identified and prioritized with consideration of current market conditions during future project-level planning efforts. We would welcome the participation of all stakeholders in those processes as they occur in the future.

    The level of biomass removal incorporated into these future projects would have to consider the desired conditions and other relevant Plan components for retention of coarse woody debris, soil productivity, and impacts to watershed conditions.

98. **Concern Statement:** The Forest Service should incorporate a biomass target to encourage biomass projects. Biomass use is a significant, emerging opportunity and creates a use for non-commercial material that helps improve forest health.

    Response: The development of Alternative E-Modified and the final Plans did include a desired condition that states "Small diameter biomass provides a variety of forest products, such as hog fuel, fuel chips, pulp, small diameter round-wood, and firewood. Biomass harvesting projects are designed to both improve the resilience and health of forests as well as support opportunities to lead the development of innovative wood building products."

    The specific types of timber sales and what products to include in them during the planning period are decisions that would be identified and prioritized with consideration of current market conditions during future project-level planning efforts. We would welcome the participation of all stakeholders in those processes as they occur in the future.

    The level of biomass removal incorporated into these future projects would have to consider the desired conditions and other relevant Plan components for retention of coarse woody debris, soil productivity, and impacts to watershed conditions.

Forest Management: Cool and Moist Forest Types

99. **Concern Statement:** The Forest Service should actively manage moist and cool forests for timber production.

    Response: The analysis outlined in the "Ecological Resilience" and "Forested Vegetation" Affected Environment sections of the Final Environmental Impact Statement indicate that the dry upland forest currently exists in the most highly departed state when compared with desired conditions. The dry upland forest potential vegetation group is also the dominant vegetation group across the Blue Mountains. When the condition of dry upland forest vegetation is this highly altered from the historical range of variability it indicates that the risk of losing key ecosystem components in the future, including timber resources, is very high. Therefore, management focus on the dry upland forest is warranted. This does not imply there is any explicit restriction on conducting appropriate management activities within the moist upland and cold upland forests. Some of these moist upland forest areas are included in the designation of lands suitable for timber production, and would be expected to contribute timber products toward the allowable sale quantity. The intent of the agency preferred alternative is to focus restoration on where it is most needed, but the specific areas requiring and being scheduled for active treatment in the near term would be identified and prioritized in the context of the Plan's desired conditions during future project-level planning efforts.

100. **Concern Statement:** The Forest Service should develop separate management approaches for moist forests because of the unique disturbance regimes and associated mix of successional stages and because these forests are a significant portion of the plan area.

    Response: Distinct desired conditions for the moist upland forests have been developed. They recognize and were developed within the context of its unique characteristics and disturbance regimes. The desired conditions for forest vegetation were based on an analysis of vegetation conditions, as they would likely have existed under the historical range of natural variability. These desired conditions have been developed for virtually

all of the diverse forest types common to the forests of the Blue Mountains. An integral part of the work done to estimate the characteristics of the historical range of variability was the incorporation of our best understanding of how natural disturbance regimes and stand dynamics of the different types of forest function. The desired conditions for forest vegetation contain quantifiable goals for structural stages, species composition and stand density. During the implementation of the plan, forest managers can compare the existing condition of the moist upland forest to the relevant measurable desired characteristics to gauge the need to develop management actions. However, the specific treatment prescriptions would be identified during future project-level NEPA planning efforts.

101. **Concern Statement:** The Forest Service should allow for the growth of late seral forest communities and multi-layered canopy structure in moist and wet forest types and should recognize microclimate variability that supports denser forest types in dry forests (for example, north-facing slopes and riparian areas). Large areas of moist mixed conifer forest should be excluded from logging to provide contiguous habitat and preserve old forest multi-story habitat within its historical range of variability.

    Response: The revised Forest Plans contain specific desired conditions for all forest vegetation structural stages (from stand initiation to late seral or old forest). These desired conditions were based on the results of historical or natural range of variability analysis. This work was based on our best understanding of how natural disturbance regimes and the successional stand dynamics of the different types of forest naturally function. This analysis supported the development of distinct desired conditions for the moist and cold upland forests. These desired conditions recognize, and were developed within the context of, the unique characteristics and disturbance regimes of each distinct forest type. The types of prescriptions and degree of management in the moist and cold upland forests will differ from the dry forest, because it will be driven by the specific range of natural variation for these forest types.

    Many areas of the National Forests are allocated to management areas like wilderness or backcountry, where little if any timber harvesting is expected to occur. Development of old forests within these areas will largely depend on natural disturbance processes and inherent stand development dynamics. However, it is also important to understand that many old forest structures of the dry and mixed conifer uplands would naturally tend to develop more in response to frequent disturbance rather than in response to natural successional processes. These types of old forest will look and function very differently than the somewhat stereotypical Pacific Northwest's moist coastal model of old forest. As a result, under natural conditions, many old forests of the Blue Mountains would be expected to be made up predominantly of relatively open single-storied structures rather than dense multi-storied stands. However, the role of naturally developed dense dry forest structure classes is recognized and the revised Plans' desired conditions do call for appropriate representation of these forest types.

    Additional discussion and information was included in the Affected Environment and Environmental Consequences sections for both the "Old Forest" and "Ecological Resilience" Issues sections in Volume 1 of the Final Environmental Impact Statement.

Forest Management: Ecological Resilience

102. **Concern Statement:** The Forest Service should not assume that the most aggressive management will best restore ecological resilience as management, such as logging, can

have negative impacts on a forest health (soil compaction and degradation, loss of snags, spread of invasive weeds, and potentially higher severity wildfires, for example).

Response: The revised Forest Plans contain no presumption that active management is the only desirable strategy for achieving desired conditions. Many areas of the National Forests will remain allocated to management areas like wilderness or backcountry, where little if any active silvicultural management is expected to occur. In some cases, perhaps where a watershed is currently well-functioning and resilient, a passive, "hands-off" approach to management may be appropriate, but within a large portion of the National Forests, a history of fire suppression and other legacy effects of past management has led to conditions that will necessitate a more active approach to restore more natural conditions and mitigate current risks.

When thoughtfully designed to operate along with ecological processes, or even as surrogates to natural disturbances, forest management techniques like timber harvesting, prescribed burning, pre-commercial thinning and tree-planting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions. The discussion describing the harvest and stand management prescriptions common to all alternatives and how those treatments would produce positive changes in terms of ecological resilience has been expanded in the Final Environmental Impact Statement. This analysis can be found in the "Ecological Resilience" section of Chapter 3. The potential negative side effects of harvesting and other forestry treatments are acknowledged and disclosed in other relevant resource area sections of this document that discuss topics such as soil, water, aquatic resources and terrestrial wildlife habitat. Most of these past forestry practices and regeneration techniques were originally developed as part of classic silvicultural systems that were primarily concerned with producing and harvesting mature crops of timber products. Modern approaches to forest management now view timber harvest and other silvicultural techniques also as restoration tools that can be used to modify stand structures, species composition, stand density, landscape patterns and potential fire behavior. This approach is sometimes referred to as "ecological forestry," or "emulation of natural disturbance," as it attempts to fully incorporate an understanding of natural disturbance and stand development processes. This concept of using forest management to emulate natural disturbance has been discussed within a growing body of science literature and is often recommended as a technique to help restore resilient forest conditions.

103. **Concern Statement:** The Forest Service should manage for a more resilient ecosystem and improved watershed conditions without changing existing goals or management area designations.

Response: We agree that the Forest Service should manage the Blue Mountains national forests for increased ecosystem resilience and improved watershed conditions. As stated in the opening sections of the Revised Forest Plans, many conditions have changed since the Forest Plans were approved in 1990. Changes include, but are not limited to economic, social, and ecological conditions; new laws, regulations, and policies have been developed; and new information resulting from monitoring and scientific research are available. The Analysis of the Management Situation provides additional information including overviews of current direction and current management along with need for change summaries. The three National Forests are revising their Forest Plans to respond to these changed conditions and the need to meet the legal requirements of the National Forest Management Act of 1976. Additionally, the revised

Forest Plans will provide consistent management direction across the three National Forests.

The revised Forest Plans contain many similar goals compared to the 1990s Plans. These goals include management direction for multiple resource areas including cultural resources, air, soil and water, recreation, land ownership, wilderness, energy, minerals, and transportation. Other goals stated in the Forest Plans emphasize:

- Riparian and Aquatic Resources
- Old Forest
- Invasive Species
- Wildlife
- Rangeland Vegetation and Domestic Livestock Grazing

Management areas developed in the 1990s forest plans were consolidated into fewer categories than what is listed in the revised Forest Plans, but still there is similarity to those developed in past plans. As amendments have been needed since 1990 across the three National Forests for changes made in specific sections of management areas, changes need to be verified across the landscape. While management areas in the 1990s Forest Plans, such as botanical areas and historical areas, are not consistently described or identified within the three Forest Plans, the plans generally have similar management expectations across large areas. Management areas in the revised Forest Plan similarly describe broad areas where general management intent is similar (see Map Packet). The purpose of management areas is to provide consistent guidance for similar portions of national forest landscape when implementing or continuing management activities. The management areas generally range along a continuum from little development by humans in Management Area 1A to extensive human development in Management Area 5.

The Final Environmental Impact Statement includes a range of alternatives, with Alternative A representing management direction as presented in 1990s Forest Plans. While these plans provide adequate management direction, the direction is not as responsive, when compared to the other revised plan alternatives, to the observed changes that have accrued during the intervening 20 plus years since the first generation Forest Plans were approved.

104. **Concern Statement:** The Forest Service should consider an option that allows natural processes to shape the landscape. Proposed alternatives will exacerbate past over-logging and excessive grazing and roading and will simplify and homogenize complex forest structures and ecological niches.

Response: Some people desire the revised Forest Plans to virtually eliminate timber harvesting and other human uses and human-induced impacts to the National Forests of the Blue Mountains. A minimum management alternative approach was considered as Alternative G, but not developed in detail. Outdoor recreation, range, and timber are all among the uses that the Multiple-Use Sustained Yield Act of 1960 requires the National Forests to be administered for. This minimal management approach would not address all of the issues identified with the purpose and need of the Forest Plan revision, and it would eliminate many of the multiple uses and benefits for which the National Forests were created.

In some cases, perhaps where a watershed is currently well-functioning and resilient, a case could be made for a passive, "hands-off" approach to management, but within a large portion of the National Forests, a history of fire suppression and other legacy effects of past management has led to conditions that will necessitate a more active approach to restore more natural conditions. Forest management techniques like timber harvesting, prescribed burning, pre-commercial thinning and tree planting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions. The discussion describing the harvest and stand management prescriptions common to all alternatives and how those treatments would produce positive changes in terms of ecological resilience has been expanded in the Final Environmental Impact Statement, and can be found in the Environmental Consequences portion of the "Ecological Resilience" section.

105. **Concern Statement:** The Forest Service should include soil health as an indicator of ecological resilience.

    Response: Soil health and potential effects to soils are discussed in the Final Environmental Impact Statement "Soils" section. While it is not expressly named as an indicator of ecological resilience, soil health and condition is certainly considered in this document; as directed by Forest Service Manual FSM 2551.5 (Soil Quality Indicators) "Soil quality indicators are developed to give insights as to how well the inherent soil is functioning (i.e., biologically, hydrologically, carbon storage, etc.) The ultimate goal of the soil quality indicators is to provide information on the health of the soil."

106. **Concern Statement:** The Forest Service should emphasize multiple-use management, not simply due to comply with the Multiple Use Sustained Yield Act and other statutes, but because it is ecologically beneficial to the landscape.

    Response: Each alternative was developed to comply with applicable laws and regulations, including the Multiple Use Sustained Yield Act, Organic Act, National Forest Management Act and others. We agree that properly designed and implemented multiple-use management can be ecologically beneficial.

107. **Concern Statement:** The Forest Service should not allow any new roads, including temporary roads, to be built to help ensure ecological integrity. All timber sales should require road improvements.

    Response: Forest management techniques like timber harvesting, prescribed burning, pre-commercial thinning and tree planting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions. The revised Forest Plans provide programmatic direction as to where motorized use may or may not be suitable. Additionally, desired conditions for motorized use are integrated to meet other resource needs, provide for user safety, and to comply with existing laws, regulation, and policy. The revised Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses, and similarly do not identify the specific need to construct new roads. Forest transportation systems are considered through the travel management process and subsequent site-specific analysis processes. Temporary roads are constructed only for short-term, non-recurrent use by a timber purchaser or contractor.

    The transportation needs for timber harvesting projects are determined on a case-by-case basis during project level transportation planning. Forest Service policy is to plan for the least-cost road needed to meet the resource objectives for the sale. The timber purchaser pays for the cost of building or improving a road only to the standard needed for

consistency with applicable environmental laws and regulations and as needed for timber harvest. Similarly, a timber sale contractor is responsible for their fair share of maintenance work, commensurate with their proportional level of use.

108. **Concern Statement:** The Forest Service should not use clearcutting or regeneration harvests to prevent homogenization and fragmentation of forests and to protect biodiversity, soil productivity, and ecological resilience.

    Response: Even-aged regeneration harvesting techniques like clearcutting or seed tree harvesting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions. In many areas of the forests, the increasing trend toward homogenous, simplified stand structures is not so much due to regeneration harvesting, but is largely the result of the suppression of natural regeneration and maintenance processes like wildfire. When thoughtfully designed to operate along with, or even emulate natural ecological processes, forest management techniques like timber harvesting can be useful tools to help manage and move forest vegetation conditions toward more resilient heterogeneous conditions. The discussion describing the harvest and stand management prescriptions common to all alternatives and how those treatments would affect positive changes in terms of ecological resilience has been expanded in the Final Environmental Impact Statement and can be found in the Environmental Consequences portion of the "Ecological Resilience" section. The potential negative side effects of harvesting and other forestry treatments are also addressed in other relevant resource area sections of this document featuring topics such as soil, water, aquatic resources and terrestrial wildlife habitat.

Forest Management: Existing and Desired Conditions

109. **Concern Statement:** The Forest Service should use more current data to reflect existing vegetation conditions within all management areas, including wilderness and roadless areas. In addition, the Forest Service should discuss the impact of limited recent management on current forest conditions.

    Response: The existing condition of the forest vegetation was characterized by examining the Forest Service existing vegetation polygon data. The vegetation database contains summarized information for each of the polygons mapped on their respective vegetation layers. Data sources for individual polygons vary, but include walk-through examinations, photo-interpretation, intensive stand examination plot data, and Most Similar Neighbor (MSN) modeling. The forest is continuously changing, and it is not possible to maintain a forestwide condition inventory in a "real-time" status. This data set is updated periodically and reflects the effects of both past management and disturbance events. This data set was used to make general forestwide descriptions of the overall forest vegetation. All such general characterizations of overall conditions that are inferred from a limited sample set include a certain amount of statistical uncertainty. The Forest Service believes that this degree of inherent sampling error or ambiguity is reasonable when analyzing at the scale of a forestwide plan revision. Furthermore, the issues, trends and general conditions indicated by the data are consistent with the conditions described in the science literature by several current regional broad-scale assessments. Some of these relevant science documents and reports are quite recent and were not included, or were not yet available when the draft Plan and Environmental Impact Statement documents were being prepared. They have now been taken into account and are referenced throughout the Final Environmental Impact Statement. Additional information regarding the methodology behind the characterization of the

existing forest vegetation was added to the "Forested Vegetation" section of Chapter 3 in the Final Environmental Impact Statement, and the section was reorganized to improve clarity and readability.

110. **Concern Statement:** The Forest Service should develop desired conditions for the wide diversity of forest types and should take into account susceptibility of these forest types to disturbance, such as wildfire and insects. Desired conditions should be measurable.

    Response: Distinct desired conditions for all of the diverse upland forests have been developed. They recognize and were developed within the context of each forest type's unique characteristics and disturbance regimes. The desired conditions for forest vegetation were based on an analysis of vegetation conditions as they would likely have existed under the historical range of natural variability. An integral part of the work done to estimate the characteristics of the range of historical variability involved the incorporation of our best understanding of how natural disturbance regimes and stand dynamics of the different types of forest function. The desired conditions for forest vegetation contain quantifiable landscape-scale goals for structural stages, species composition, and stand density. The discussion of forest vegetation and the related methodology has been improved in the Final Environmental Impact Statement and additional information has been provided to explain the rationale behind the desired conditions and their relation to the historical range of variability. At any time during the implementation of the plan, forest managers can compare the existing condition of the relevant forest landscape to the measurable desired characteristics to gauge the level of progress or to develop a purpose and need for further actions.

111. **Concern Statement:** The Forest Service should not use cover as a measure for desired forest vegetation conditions.

    Response: Ultimately, the desired conditions pertaining to stand density are related to objectives for certain general levels of relative stand density on the landscape. They are not desires for levels of canopy cover. The discussion of stand density and the related methodology has been improved in the final revised Forest Plans, as well as the Final Environmental Impact Statement. Additional information has been provided to explain the rationale behind the desired conditions related to stand density. The broad-scale analysis and modeling done in support of this forest plan revision used canopy cover as a surrogate to characterize stand density. The Forest Service acknowledges that canopy cover is somewhat different from stand density, as it represents the proportion of the ground covered by a vertical projection of the tree canopy. Canopy cover correlates with the idea of relative site occupancy, and relative density is a concept that is very important to forest managers. It is used to gauge the degree of inter-tree competition relative to some implied biological limit or "carrying capacity." Canopy cover has an advantage over other measures of absolute stand density, in that it can be readily estimated by remote sensing techniques commonly used in large-scale forest inventories. Canopy cover can also be indirectly estimated on the ground using attributes commonly collected during detailed ground examinations. Ultimately, the specific metrics used to quantify and analyze stand density during implementation will be chosen and explained during the development of individual projects, and may change over time as science, technology and levels of understanding continue to improve.

112. **Concern Statement:** The Forest Service should modify its desired conditions for forest products to focus on long-term sustained yield and a continuous and predictable supply

of timber. In addition, the desired conditions for forest vegetation should include the production of a product.

Response: The desired conditions for forest products are addressed under Goal 3 of the revised Forest Plans. These desired conditions do recognize the importance of sustainability and seek to see forest products produced and utilized to provide economic and social support to local communities. The long-term sustained yield capacity was estimated for all of the alternatives. This represents the maximum amount of timber volume that can be sustainably harvested from the lands suitable for timber production under a specific management regime consistent with other multiple-use objectives. The base timber harvest schedules of all of the alternatives were designed not to exceed this long-term sustained yield capacity, and to demonstrate a non-declining flow of sustainable forest products for at least the next five decades. The one exception to this was Alternative E-Modified Departure, which was developed and included in the Final Environmental Impact Statement. Because of the current high degree of disparity between the desired conditions for forest vegetation, fire regimes and insect/disease susceptibility versus the present state of the forest, it was believed that the exploration of a departure alternative was warranted. The departure version of Alternative E-Modified's harvest schedule was developed outside of the constraints of non-declining sustainable flow or the long-term sustained yield capacity. (See "Ecological Resilience," "Forested Vegetation," and "Insect and Disease" sections of the Final Environmental Impact Statement, Chapter 3).

113. **Concern Statement:** The Forest Service should reconsider its desired condition for low to moderate susceptibility to insects and disease because mixed conifer forests are inherently more susceptible to such disturbances.

Response: The discussion of insect and disease and forest health has been improved in the Final Environmental Impact Statement, and considerable additional information has been provided to explain the rationale behind the desired conditions for insect and disease susceptibility. The desired conditions regarding susceptibility to insect and disease damage have been informed by a natural range of variability analysis and a science-based understanding of the ecological role of these disturbance agents. The Forest Service recognizes that, if vegetation conditions were within the historical range of variability, the range of expected susceptibility for the cold and moist upland forests would in some cases be relatively higher with regards to many common insect and disease agents (see Chapter 3 Insects and Diseases). The desired conditions in the revised Forest Plans have been clarified to indicated that the Forest Service seeks to see *characteristic* levels of insect and disease activity and mortality play a role within the forests. What is considered a characteristic level of susceptibility and activity is expected to vary among forest types and between the various specific disturbance agents.

Goals and desired conditions must also consider societal values and desires. Significant losses and disruptions in these natural resources and ecosystem services caused by insect and disease epidemics are a major societal concern. Current landscape patterns characterized by large expanses of uncharacteristically dense pine forests and/or landscape wide expansions of shade tolerant grand fir cover types are largely the undesired by-product of past management practices. These conditions are contributing to levels of insect and disease risk that are not considered to be consistent with the Forest Service's current emphasis on creating and maintaining forest conditions that promote long-term forest resiliency. There is a desire to create stand conditions with largely low

to moderate vulnerability to insects and diseases across the majority of the upland forest potential vegetation groups, but only to the extent that those forest stand conditions are consistent with the natural range of variation.

114. **Concern Statement:** The Forest Service should add the production of timber and other goods to the desired condition for General Forest Management Areas (MA 4A).

    Response: While all of the lands classified as suitable for timber production are contained within Management Area 4A, not all areas within Management Area 4A are suitable for timber production. For that reason, the desired conditions related to timber production are not listed under the MA 4A direction, but can be found in the revised Plans under "Goal 3 – Goods and Services." The desired conditions related to forest products aspire to see lands classified as suitable for timber production having a regularly scheduled timber harvest program that provides social and economic benefits while contributing toward ecosystem health and sustainability. The desired conditions also look for non-timber forest products, such as berries and mushrooms, to continue to be available for gathering in sustainable amounts for public, commercial, and tribal use.

Forest Management: Forest Products

115. Concern Statement: The Forest Service should increase firewood opportunities and reduce restrictions, for example by allowing all dead trees to be offered as free firewood and by offering small, low-impact firewood sales.

Response: The desired conditions of the revised Plans include providing a variety of forest products, such as firewood, and also providing non-timber forest products, such as berries and mushrooms, in sustainable amounts for public use. While the revised Forest Plans would include some restrictions on firewood gathering in areas like riparian management zones and special botanical areas, the revised Forest Plans do not contain forestwide restrictions on firewood gathering. The plans are programmatic in nature and any subsequent site-specific decisions regarding further restrictions on, or changes to firewood gathering policy would be informed by the revised plan components and determined on a case-by-case basis. Personal use firewood gathering is permitted largely in response to demand and is expected to continue at levels similar to those seen in the recent past.

116. **Concern Statement:** The Forest Service should offer post and pole sales to meet high demand for rounds.

    Response: A Forest Plan provides programmatic guidance. It provides the basis for subsequent site-specific, project-level decisions to be made, but the specific types of commercial timber sales and what products to include in them during the new planning period are decisions that would be identified and prioritized with consideration of current market conditions during future project-level planning efforts. We would welcome the participation of all stakeholders in those processes as they occur in the future.

Forest Management: Historical Range of Variability (HRV)

117. **Concern Statement:** The Forest Service should not focus on managing forests toward the historical range of variability. Managing for conditions that occurred with far different populations and socio-economic interests isn't reasonable and would

negatively affect local economies. Instead, the Forest Service should manage stands for the culmination of mean annual increment.

Response: Historical or natural range of variability analysis is based on disturbance process state and transition modeling. This modeling program was developed by a cadre of multiple ecological scientists in order to evaluate the effects of disturbance regimes over time and develop a range of variation for forest conditions based on those effects. The results represent broad ranges of conditions depicted by the historical range of variability that would allow considerable flexibility in future management choices. This range of variability is then used as an ecological basis for comparison to current conditions to assist in determining the current forest health and associated resiliency to disturbance. The main idea is that if landscapes are restored to and maintained within this natural range of variability, then this represents our best chance to maintain ecological integrity and sustainability over time. Ensuring the long-term sustainability of the forests is critical to meeting both the present and future needs of the forest-dependent local communities.

Culmination of mean annual increment is the age at which a stand would be harvested if the sole management objective is to maximize long-term timber production. This is a useful metric in the context of timber management and to help ensure long-term sustainability of the timber resource. Forest Service regulations require that even-aged regeneration harvesting generally be limited to only occurring in those stands that have achieved or surpassed the culmination of mean annual increment (CMAI). However, management of the forests would also be shaped by other multiple use goals, in addition to timber production, like restoring the natural resilience of forest ecosystems on the landscape.

118. **Concern Statement:** The Forest Service should focus on maintaining landscape integrity in the face of anticipated climate change, or a future range of variability, instead of focusing on the historical range of variability.

Response: The Forest Service has considered the argument that the pre-settlement era should no longer be used as a reference baseline because future conditions could be much warmer and drier than the mid-1800s due to climate change. However, given the enormous degree of uncertainty associated with the magnitude, timing, scale, and spatial extent of anticipated climate change impacts, we find that the historical range of variability approach is warranted because it has considerably less uncertainty associated with it compared to any simulated predictions for the future. Given the nature of the primary forest stressors outlined by recent climate change risk assessments, it seems unlikely that using the historical range of variability to inform desired conditions and guide management efforts will result in inappropriate activities within the near and mid-term time frames of the next plan period. Historical reference conditions remain useful to guide management because forests were historically resilient to the same disturbances that are predicted to increase under many climate change scenarios, namely drought, insects, pathogens and severe wildfire. Many of the forest management activities that will be used to move toward our desired conditions have a recognized role as part of a climate change adaptation strategy. For example, using a full suite of management options including mechanical thinning and prescribed burning will facilitate the creation of a forest mosaic of different age-classes, species and structures across the three National Forests. This mitigates risk and serves as a climate adaptation strategy that will also provide functional diversity and a range of habitats at large spatial and temporal scales. These conditions will increase resilience to stressors and ensure that forests are

sustainable in the face of possible climate changes. More discussion regarding the historical range of variability and anticipated climate change effects can be found in the Final Environmental Impact Statement.

119. **Concern Statement:** The Forest Service should use an earlier point of reference for historical range of variability – prior to Euro- American logging, homesteading, grazing, mining, and so on.

    Response: The forest vegetation historical range of variability analysis completed for the revised Forest Plans was based on our understanding of conditions and ecological processes prior to Euro-American influence. Historical or natural range of variability analysis is based on disturbance process state and transition. This modeling program was developed by a cadre of multiple ecological scientists in order to evaluate the effects of disturbance regimes over time and develop a range of variation for forest conditions based on those effects. Although the disturbance regimes are based on pre-settlement conditions, the model itself is not based on a static timeframe and is not meant to represent a specific "snapshot" in time. Selecting a single temporal point would be inconsistent with the range of variability concept, as it is not intended to characterize a static, unchanging environment. Forests of the Blue Mountains region evolved with a combination of natural disturbances, natural forest succession and native human uses. The historical range of variability of forest conditions is designed to characterize the broad range of vegetation composition, structure, and densities that would have likely resulted from these agents of change as they would have operated prior to Euro-American settlement. This timeframe is often defined as the early to mid-1800s because it coincides with the era when significant Euro-American influences began in the Blue Mountains. However, the actual range of variability values were the result of dynamic landscape modeling, and were not based on a specific description of historical conditions.

120. **Concern Statement:** The Forest Service should clarify how it determined what "characteristic" levels of insects and disease were and what information it used to determine that levels of insect and disease mortality are above historical levels.

    Response: The discussion of insect and disease and forest health has been improved in the Final Environmental Impact Statement and considerable additional information has been provided to explain the rationale behind the desired conditions for insect and disease susceptibility. The desired conditions regarding susceptibility to insect and disease damage have been informed by a natural range of variability analysis and a science-based understanding of the ecological role of these disturbance agents. To help provide more perspective regarding what might be considered historically normal levels of susceptibility, reference conditions for insect and disease susceptibility were developed based on the forest vegetation conditions that are believed to have existed within the historical range of variability. The resulting ranges of susceptibility are assumed to represent the inherent insect or disease susceptibility associated with forest vegetation having little or no departure from reference conditions. While these ranges for the insect and disease susceptibility do reflect some degree of professional judgment, they are also generally consistent with information from other published reports characterizing the susceptibility associated with historical forest conditions.

121. **Concern Statement:** The Forest Service should not assume that all mechanical treatments have positive effects on returning the landscape toward the historical range of

variability as this fails to account for logging impacts and the exacerbation of departure of wet and moist forests.

Response: When thoughtfully designed to operate along with ecological processes, or even as surrogates to natural disturbances, forest management techniques like timber harvesting, prescribed burning, pre-commercial thinning and tree-planting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions. The potential negative side effects of harvesting and other forestry treatments are addressed in relevant resource area sections of the Final Environmental Impact Statement covering topics such as soil, water, aquatic resources and terrestrial wildlife habitat. The discussion describing the harvest and stand management prescriptions, and how those treatments would affect positive changes in terms of ecological resilience has been expanded in the Final Environmental Impact Statement and can be found in the Environmental Consequences portion of the "Ecological Resilience" section. Most of these forestry practices and regeneration techniques were originally developed as part of classic silvicultural systems, which were primarily concerned with producing and harvesting mature crops of timber products. Modern approaches to forest management now view timber harvest and other silvicultural techniques as restoration tools that can be used to modify stand structures, species composition, stand density, landscape patterns and potential fire behavior. This approach is sometimes referred to as "ecological forestry," or "emulation of natural disturbance," as it attempts to fully incorporate an understanding of natural disturbance and stand development processes.

122. **Concern Statement:** The Forest Service should refine landscape pattern objectives to protect large patches of underrepresented and rare habitat and move the landscape toward the historical range of variability.

    Response: The discussion and content of the desired conditions for landscape pattern have been significantly revised and improved in the revised Forest Plans. These desired conditions call for forest vegetation to be managed sustainably within the range of variability of disturbance and successional patterns as caused by fire, insects and disease, and weather without a decline in soil or vegetation productivity, biodiversity, or in water quantity and quality.

Forest Management: Level, Pace and Scale

123. **Concern Statement:** The Forest Service should create an alternative to increase the pace and scale of active management (for example, doubling the number of acres treated) so that more of the national forest landscape is managed. Managing additional acres would improve scenic and ecological conditions by reducing fire hazard, improving forest resistance to insects and disease, protecting soils, and supporting climate adaptation. Re-treatments could maintain desired stand densities and surface fuel levels. Improvement of watershed and aquatic conditions could be accelerated as well.

    Response: A wide range of alternatives were developed for the Draft Environmental Impact Statement, and the draft revised Forest Plan was designed around potentially increasing the current harvesting acres by 2 to 3 times. We subsequently received many comments about increasing the pace and scale of restoration on the national forests to help prevent catastrophic fires, improve habitat for big game animals, and provide a flow of forest products to local mills to stimulate local economies. As a result, two additional alternatives, designed to support an increased pace and scale of restoration,

were developed and analyzed in the Final Environmental Impact Statement. Alternative E-Modified would maintain an overall level of harvesting similar to Alternative E, but would envision a focus of these harvest acres more intently on the portions of the dry upland forest that currently show the greatest need for immediate treatment. This alternative would allow for considerable increases in the thinning of the dense-dry upland forest within 20 years while still being consistent with the sustainability principles of the non-declining flow rules.

A departure version of Alternative E-Modified was also developed, unconstrained by non-declining flow requirements. Because of the current high degree of disparity between the desired conditions for insect/disease susceptibility, forest vegetation and fire regimes, versus the present state of the forest, it was believed that the exploration of a departure alternative was warranted.

Planning regulations allow Alternative E-Modified Departure to temporarily waive the non-declining flow rules. Without this constraint, the alternative was able to accommodate thinning essentially all of the acres of dense-dry upland forest located within the lands suitable for timber production within 20 years. When combined with additional restoration thinning taking place on other lands that are suitable for harvest, the Alternative would plan for thinning roughly 70 percent of the dense-dry upland forest acres that are available for harvest treatment within the next 20 years. This would represent approximately 35 percent of the entire forest land that is designated as suitable for harvesting. The effects of this alternative were analyzed across all resource areas, and these effects will be considered by the responsible official.

124. **Concern Statement:** The Forest Service should increase the predicted annual timber harvest to capture a higher percentage of annual growth and thus reduce biomass accumulation and overstocked forest stands.

    Response: A wide range of alternatives were developed for the Draft Environmental Impact Statement, and the draft revised Forest Plan was designed around potentially increasing the current harvesting acres by two to three times. We subsequently received many comments about increasing the pace and scale of restoration on the forests to help prevent catastrophic fires, improve habitat for big game animals, and provide a flow of forest products to local mills to stimulate local economies. We understand that the rate and scale at which active management attempts to move toward the desired conditions is important because in the past, the pace of restoration activities has not kept up with the negative impacts resulting from continued forest ingrowth, fuel accumulation and a changing climate. As a result, two additional alternatives, including a departure alternative, which is unconstrained by non-declining flow rules were developed. The agency's preferred alternative, E-Modified, would plan to accommodate some kind of active management treatment on most of the available forest landscape within 40 to 50 years. Every alternative includes some management areas that do not permit timber harvest. None of the alternatives, not even E-Modified Departure, would make every acre available for timber harvesting, and these constraints make the goal of treating every acre of national forest land unrealistic. Treatment schedules for timber harvesting cannot be prepared in isolation from the other desired conditions and multiple use objectives of the plan alternatives.

125. **Concern Statement:** The Forest Service should increase timber harvest (225-300 million board feet, for example) to sustain the local harvesting and milling

infrastructure, support current collaborative efforts and stewardship contracts, and fund schools. The timber program should provide a continuous supply of timber.

Response: Analysis done to support the Final Environmental Impact Statement shows that increasing timber harvest levels to 225 – 300 million board feet annually would not be sustainable over time. These unsustainable harvest levels would not meet the goal of providing a continuous supply of timber. A wide range of alternatives was developed for the Draft Environmental Impact Statement. Subsequent to the release of the draft Plan, we received many comments about increasing the flow of forest products to local mills to stimulate local economies. As a result, two additional alternatives, including a departure alternative, which is unconstrained by non-declining flow rules were developed, and the methodology behind the calculation of estimated timber yields was re-examined and improved for the Final Environmental Impact Statement. The final versions of the revised Forest Plans would accommodate increasing the timber volume objectives across the three National Forests to roughly 150 to 200 percent of their recent accomplishment levels.

126. **Concern Statement:** The Forest Service should consider alternatives unconstrained by the idea of non-declining flow or budget limitations to allow for innovation that could increase the pace and scale of restoration.

    Response: Many people commented that the planned objectives should not be constrained by budget. It is not realistic or reasonable to ignore expected funding levels and capacity. A forest plan does not influence or control the budget for a National Forest, but the range of alternatives analyzed included varying budget levels for some program areas that would exceed the most recent budgets.

    A departure version of Alternative E-Modified was also developed, which was unconstrained by non-declining flow requirements. Because of the current high degree of disparity between the desired conditions for insect and disease susceptibility, forest vegetation and fire regimes, versus the present state of the forest, it was believed that the exploration of a departure alternative was warranted.

    Planning regulations allow Alternative E-Modified Departure to temporarily waive the non-declining flow rules. Without this constraint, the alternative was able to accommodate potentially thinning essentially all the acres of dense-dry upland forest located within the lands suitable for timber production within 20 years. When combined with additional restoration thinnings taking place on other lands suitable for harvest, the alternative would accommodate thinning roughly 70 percent of the dense-dry upland forest acres that are available for harvest treatment within the next 20 years. This would represent approximately 35 percent of the entire forest land base that is designated as suitable for harvesting.

127. **Concern Statement:** The Forest Service should optimize the plan for maximum sustainable timber harvest.

    Response: Alternatives proposing exclusive use or production of one resource at the expense of other resources were not considered. Several laws mandate that the Forest Service manage public lands for multiple uses and sustained yield. This legal and regulatory framework eliminates exclusive-use alternatives. As such, the estimated harvest and related treatment schedules behind the allowable sale quantity and timber sale program quantity were not prepared in isolation from the other desired conditions and multiple use objectives of the plan alternatives. The basis for the harvest schedule is

the overall design of the alternatives being considered. Analysis of harvest scheduling to estimate forest product output levels is not limited to being a timber volume optimization exercise, but also considered and evaluated the ability of the harvests to move toward or maintain a set of desired conditions through sustained silvicultural activity over a long time horizon. In addition to providing timber products, these desired conditions and related design elements also include reducing the risk of uncharacteristic fire, reducing insect and disease susceptibility, providing habitat for specific species and controlling the cumulative impact of harvest activity to maintain watershed health. All of these considerations provide potential reasons for timber harvest activities, but also may impose limitations on the overall harvest schedule.

Forest Management: Old Forests and 21-Inch Rule

128. **Concern Statement:** The Forest Service should drop the arbitrary 21-inch rule that prevents harvest of trees with a diameter more than 21 inches because it is not sound science. Eliminating the 21-inch rule would allow harvest to help fund roads, schools, and local services. It would support local mills and create more economically viable projects. Retaining all 21-inch trees converts thousands of acres of ponderosa pine, larch and dry forests to forests dominated by species like white fir that are shade tolerant and fire intolerant.

    Response: The Forests received various comments on the draft Plan and Environmental Impact Statement either advocating for, or criticizing different approaches to old forest conservation and management that were considered in the alternatives. In response, additional discussion and information was included in the Affected Environment and Environmental Consequences sections for the Old Forest Issue in the Final Environmental Impact Statement. These changes were made to improve the understanding of the definitions, ideas and context surrounding this issue as well as the trade-offs involved with the different management strategies such as diameter limits. A wide range of alternative approaches to old forest management were explored with the Draft Environmental Impact Statement alternatives, and two additional alternatives are included in the Final Environmental Impact Statement. Plan components in the final revised Forest Plans are designed to allow sufficient management flexibility in order to address desired conditions for forest vegetation structure class, density, and species composition as well as those pertaining to old forest.

129. **Concern Statement:** The Forest Service should retain the 21-inch Rule and Old Forest Management Areas (MA 4C) to protect and increase old and large trees which are deficit on the landscape, help achieve the stated goal of increasing ecological resilience, and protect large snags. Retaining the 21-inch Rule and Old Forest Management Areas would protect biodiversity and water quality; support nutrient cycling, carbon sequestration and other ecosystem functions; increase resilience to wildfire; and conserve habitat for wildlife. Protecting old forest structure would also conserve natural heritage and regional cultural identity.

    Response: Additional discussion and information were included in the Affected Environment and Environmental Consequences sections for the “Old Forest” section in the Final Environmental Impact Statement. These changes were made to improve the understanding of the definitions, ideas and context surrounding this issue as well as the trade-offs involved with the different management strategies such as diameter limits, harvesting restrictions and designated old forest areas. The plethora of values associated with old forest are acknowledged within the Affected Environment section as well as in

the desired conditions of the final Forest Plans. A wide range of alternative approaches to old forest management were explored with the Final Environmental Impact Statement alternatives, including Alternative C, which would include designated old forest management areas, old forest harvesting restrictions and a 21-inch diameter cap. The analysis results regarding old forest conservation approaches and expected increases in old forest structures over time indicate these types of strategies do not offer the best expected results in terms of old forest conservation. Plan components in the final revised Forest Plans are designed to allow sufficient management flexibility in order to address desired conditions for forest vegetation structure class, density and species composition as well as those pertaining to old forest.

130. **Concern Statement:** The Forest Service should remove Old Forest Management Areas (MA 4C) and allow harvest within older forests to reduce losses of these stands to wildfire or insect mortality.

    Response: Additional discussion and information relevant to this topic was included in the Affected Environment and Environmental Consequences sections for both "Old Forest" and "Ecological Resilience" sections in the Final Environmental Impact Statement. These changes were made to improve the understanding of the definitions, ideas and context surrounding this issue as well as the trade-offs involved with the different management strategies such as diameter limits, harvesting restrictions and designated old forest areas. A wide range of alternative approaches to old forest management were explored with the Final Environmental Impact Statement alternatives, including Alternative C which would include designated old forest management areas (MA 4C) and strict restrictions on harvesting within old forest. However, none of the other plan revision alternatives would include old forest management areas. Alternative D would include many old forest areas with the lands designated as suitable for timber production. The final revised Forest Plans do not classify old forest stands as suitable for timber production, but they consider harvesting within old forest to be a suitable activity if designed to support resource objectives other than timber production. Modern approaches to forest management now view timber harvest and other silvicultural techniques as restoration tools that can be used to modify stand structures, species composition, stand density, landscape patterns, insect/disease susceptibility and potential fire behavior. Plan components in the final revised Forest Plans are designed to allow sufficient management flexibility in order to address desired conditions for forest vegetation structure class, density, and species composition as well as those pertaining to old forest.

131. **Concern Statement:** The Forest Service should prevent logging in mature forests to allow these stands to age and replace old forests lost to disturbance.

    Response: Management activities, including carefully designed harvesting treatments, are not necessarily incompatible with the continued development of forest stands into old forest structural stages. Additional discussion and information was included in the Affected Environment and Environmental Consequences sections for the "Old Forest" section in the Final Environmental Impact Statement. These changes were made to improve the understanding of the definitions, ideas and context surrounding this issue as well as the trade-offs involved with the different management strategies such as diameter limits, harvesting restrictions and designated old forest areas. A wide range of alternative approaches to old forest management were explored with the Final Environmental Impact Statement alternatives, including Alternative C, which would include designated old forest management areas and strict restrictions on harvesting

within old forest. The analysis results regarding old forest conservation approaches and expected increases in old forest structures over time indicate these types of strategies do not offer the best expected results in terms of old forest conservation. The indicators show that the approaches used in Alternative C would, in all probability, result in maintaining old forest structures at low levels that are highly departed from the desired conditions.

132. **Concern Statement:** The Forest Service should focus on developing all structural stages of forest rather than focusing on conserving and developing old forest structure. If the forests manage for the high end of the desired condition range, 80 percent of dry upland forests could be in old forest structural stages.

    Response: The desired conditions for the final Forest Plans do contain specific desired conditions for all of the major forest vegetation structural stages from stand initiation to old forest. These desired conditions were based on the results of historical or natural range of variability analysis and they represent broad ranges of conditions that would allow considerable flexibility in future management choices. An analysis of existing conditions (see Final Environmental Impact Statement, "Old Forest" section, Affected Environment) shows that the old forest single-story stage of the dry upland forest potential vegetation group has been greatly reduced from historical levels. At the same time, other structural stages, the mid-aged understory reinitiation phase are grossly overrepresented. This is the most striking area of departure from natural conditions in terms of old forest structure within the Blue Mountains potential vegetation groups. When the condition of forest vegetation structures are this highly altered from the historical range of variability it indicates that the risk of losing key ecosystem components in the future, including timber resources, is very high. Therefore, management consideration on old forest is warranted. These ideas are discussed more in Chapter 3 of the Final Environmental Impact Statement in the sections concerning "Old Forest" and "Ecological Resilience."

133. **Concern Statement:** The Forest Service should avoid having a policy of retaining trees over 150 years old because the age limit is arbitrary and age limits are difficult to implement. Nor should the Forest Service use the complex Van Pelt guidelines or the ambiguous policy of retaining trees with "old tree characteristics."

    Response: Additional discussion and information was included in the Affected Environment and Environmental Consequences sections for the "Old Forest" Issue in the Final Environmental Impact Statement. These changes were made to improve the understanding of the definitions, ideas and context surrounding this issue. A wide range of alternative approaches to old forest management were explored with the plan revision alternatives, including using age-based limits and age-related characteristics to conserve old trees and old forest. The various trade-offs associated with these and other strategies are discussed within the "Old Forest" Environmental Consequences section of the Final Environmental Impact Statement. The final revised Forest Plans do not include a firm age-limit, but do contain a guideline that generally requires retention and recruitment of old trees, large trees and legacy trees, with specific exceptions to allow for progress toward other related desired conditions of forest vegetation. Plan components in the final revised Forest Plans are designed to allow sufficient management flexibility in order to address desired conditions for forest vegetation structure class, density and species composition as well as those pertaining to old forest. Specific methods to identify old trees could be developed at the project level during implementation, but should take into

account things like species-specific characteristics, geographic context and the potential of a site to grow large trees.

134. **Concern Statement:** The Forest Service should protect old forest structure and create enforceable targets for historic levels of older forests. The Forest Service should create a standard to protect all trees over 150 years of age as well as all trees over 21-inch diameter breast height (d.b.h.).

    Response: In addition to being guided by desired conditions, old forest management direction and conservation would also include at least one specific guideline in all the alternatives except Alternative D. The agency preferred Alternative E-Modified would not include a specific land management area allocation for old forest stands, but neither would old forest stands be included as lands considered suitable for timber production. Alternative E-Modified would also contain a revised version of guideline OF-1 that requires retention and recruitment of old trees, large trees and legacy trees, wherever the individual trees occur, with specific exceptions to allow for progress toward other related desired conditions of forest vegetation. Considerable additional discussion and information were included in the Affected Environment and Environmental Consequences sections for the "Old Forest" section in the Final Environmental Impact Statement. These changes were made to improve the understanding of the definitions, ideas and context surrounding this issue as well as the trade-offs involved with the different management strategies such as diameter limits, harvesting restrictions and designated old forest areas.

135. **Concern Statement:** The Forest Service should clearly define terms related to old forest management (for example, old forest characteristics, old forest stands, legacy trees) and how it will identify old forests.

    Response: Additional discussion and information were included in the Affected Environment and Environmental Consequences sections for the "Old Forest" Issue in the Final Environmental Impact Statement. These changes were made to improve the understanding of the definitions, ideas and context surrounding this issue. The Affected Environment section for "Old Forest" explains the terms used and why. Further changes related to the development of Alternative E-Modified in the Final Environmental Impact Statement, as well as the final revised Forest Plans include a guideline that contains specific definitions of relevant terms like "large" tree, "old" tree and "legacy" tree. Definitions in the glossary have also been updated and clarified.

136. **Concern Statement:** The Forest Service should incorporate monitoring of wildlife species that require old forest habitat.

    Response: Two focal species that depend on old forest will be monitored. The white-headed woodpecker is a species that depends on dry single-story old forest and the pileated woodpecker depends on multi-story mixed conifer old forest.

Forest Management: Restoration

137. **Concern Statement:** The Forest Service should prioritize restoration of mixed conifer and cool/moist forests to increase resilience and restore structural heterogeneity and early seral habitat conditions.

    Response: The analysis outlined in the "Ecological Resilience" and "Forest Vegetation" Affected Environment sections of the Final Environmental Impact Statement indicate that the dry upland forest currently exists in the most highly departed state when

compared with desired conditions. The dry upland forest potential vegetation group is also the dominant vegetation group across the Blue Mountains. When the condition of dry upland forest vegetation is this highly altered from the historical range of variability, it indicates that the risk of losing key ecosystem components in the future, including timber resources, is very high. Therefore, management focus on the dry upland forest is warranted. These ideas are discussed at more length in Chapter 3 of the Final Environmental Impact Statement in the sections concerning "Ecological Resilience" and "Forested Vegetation." This does not imply that no management is needed or is foreseen to occur within the cool/moist upland forests. The intent of the final revised Forest Plans is to focus restoration on areas where it is most needed, but the specific areas requiring and being scheduled for active treatment in the near term would be identified and prioritized in the context of the Plan's desired conditions during future project-level planning efforts.

138. **Concern Statement:** The Forest Service should prioritize restoration of dry forest types most departed from desired conditions and should concentrate restoration in areas with established roads.

    Response: The proximity to existing transportation infrastructure can facilitate opportunities to use active management as a restoration tool, but it does not drive the need for restoration in and of itself. The intent of the final revised Forest Plans is to focus restoration on areas where it is most needed. The analysis outlined in the "Ecological Resilience" and "Forested Vegetation" Affected Environment sections of the Final Environmental Impact Statement shows that the dry upland forest currently exists in the most highly departed state when compared with desired conditions. The dry upland forest potential vegetation group is also the dominant vegetation group across the Blue Mountains. When the condition of dry upland forest vegetation is this highly altered from the historical range of variability, it indicates that the risk of losing key ecosystem components in the future is very high. Therefore, a restoration management focus on the dry upland forest is warranted.

139. **Concern Statement:** The Forest Service should focus restoration where it is needed ecologically rather than limiting restoration treatments to areas where previous harvests occurred that already have roads.

    Response: The intent of the agency preferred alternative and the final revised Forest Plans is to focus restoration on where it is needed ecologically, but the issue of cost effectiveness must also be considered. The proximity to existing transportation infrastructure can facilitate opportunities to use active management as a restoration tool, but it does not drive the need for restoration in and of itself. The specific areas requiring and being scheduled for active treatment in the near term would be identified and prioritized in the context of the Plans' desired conditions during future project-level planning efforts.

140. **Concern Statement:** The Forest Service should not build roads or conduct mechanical treatments in areas that have never been harvested.

    Response: In many cases, even areas that have never been harvested in the past have been significantly altered by human-influenced disruptions to natural disturbance regimes. For example, the continuous effects of fire suppression and livestock grazing are pervasive and have negatively changed areas that have never been harvested. Many of these areas that have never been harvested are located within wilderness or other primitive management areas where very little, if any, road building or mechanical

treatments are allowed. The intent of the final revised Forest Plans is to focus restoration on areas where it is most needed. The proximity to existing transportation infrastructure can facilitate opportunities to use active management as a restoration tool, but it does not drive the need for restoration in and of itself. The specific areas requiring and being scheduled for active treatment in the near term would be identified and prioritized in the context of the Plan's desired conditions during future project-level planning efforts.

141. **Concern Statement:** The Forest Service should not "restore lands" by logging as this practice is scientifically controversial, doesn't address impacts to aquatic resources, and is primarily designed to benefit local economies. The Forest Service should consider "passive restoration" (such as prescribed fires and wildfires) that has less impact on forest habitats and wildlife.

    Response: A variety of restoration and management strategies were considered and Alternative C presumes significant use of passive management a way to move toward the desired conditions. The revised Forest Plans contain no presumption that active management is the only desirable strategy for achieving desired conditions. Many areas of the National Forests will remain allocated to management areas like Wilderness or Backcountry, where little if any active silvicultural management is expected to occur. In these areas, the objective is to allow ecosystems to continue to be influenced by natural processes with little or no human intervention. In some cases, perhaps where a watershed is currently well-functioning and resilient, a passive, "hands-off" approach to management may be appropriate, but within a large portion of the National Forests, a history of fire suppression and other legacy effects of past management has led to conditions that will necessitate a more active approach to restore more natural conditions and mitigate current risks. When thoughtfully designed to operate along with ecological processes, or even as surrogates to natural disturbances, forest management techniques like timber harvesting, prescribed burning, pre-commercial thinning and tree-planting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions.

    The discussion describing the effects of Alternative C and all the other alternatives in terms of achieving desired conditions and improving ecological resilience is detailed in the Environmental Consequences sections discussing "Forested Vegetation," "Ecological Resilience," and "Old Forest," all of which can be found in Chapter 3 of the Final Environmental Impact Statement. The potential impacts of harvesting and other forestry treatments are also addressed in relevant resource area sections of Chapter 3 under topics such as soil, water, aquatic resources, and terrestrial wildlife habitat.

    Most of these forestry practices and regeneration techniques were originally developed as part of classic silvicultural systems, which were primarily concerned with producing and harvesting mature crops of timber products. Modern approaches to forest management now view timber harvest and other silvicultural techniques as restoration tools that can be used to modify stand structures, species composition, stand density, landscape patterns and potential fire behavior. This approach is sometimes referred to as "ecological forestry," or "emulation of natural disturbance," as it attempts to fully incorporate an understanding of natural disturbance and stand development processes. This concept of using forest management to emulate natural disturbance has been discussed within a growing body of science literature and is often recommended as a technique to help restore resilient forest conditions.

142. **Concern Statement:** The Forest Service should aggressively reduce juniper to historic levels.

    Response: The goals and desired conditions of the Forest Plans support restoring or maintaining terrestrial vegetation, which would include juniper, within the range of historical variability.

Forest Management: Salvage

143. **Concern Statement:** The Forest Service should clarify anticipated annual mortality and support expedited salvage logging, including allowance to exceed allowable sale quantity after large wildfires and analysis. Salvage logging mitigates impacts to sustained yield production after large disturbances.

    Response: When salvage harvesting occurs, it is in reaction to unplanned disturbance events, so there is no planned or anticipated objective to salvage. Unplanned salvage volumes are not considered "chargeable" volumes and do not count against the allowable sale quantity limit. The desired conditions included in the Forest Plans and Final Environmental Impact Statement have been revised to recognize a need for salvage harvest to be used to supplement the regularly scheduled timber harvest program and recover the economic value of dead and dying trees following disturbance events. Salvage harvesting can potentially play a constructive role in terms of economic benefits, fuels management and reforestation, however, the need for salvage will also have to be balanced against the desired conditions for specific types of wildlife habitat as well as any resulting resource effects. The specific areas requiring salvage treatment under the new planning period would be identified and prioritized in the context of the Plan's desired conditions during future project-level planning efforts. Additional discussion regarding salvage harvesting has been included in various sections of Chapter 3 in the Final Environmental Impact Statement including the "Ecological Resilience" and "Timber and Forest Products" sections.

144. **Concern Statement:** The Forest Service should not limit salvage logging to 100 acres, no more than 50 percent of burned areas, and trees less than 21-inch diameter because this will increase wildfire and insect outbreak risk. In addition, the Forest Service should not require retention of snags when salvage logging because this puts loggers at risk. The Forest Service should allow as much salvage as possible to meet the economic needs of local communities.

    Response: Salvage logging projects will be designed to provide economic benefit to communities while also balancing the need to leave standing and down wood for sediment and flood control as well as habitat for populations of species that depend on snags. Human safety will always be the primary concern in project design. Salvage logging guidelines have changed between the Draft and Final Environmental Impact Statement to reflect an approach that is informed by the best available science and the historical range of variability. Plan components included in the final revised Forest Plans related to snag retention and salvage harvesting avoid using many of the wholesale restrictions that were included in the draft Forest Plan. The final revised Forest Plans are designed to balance habitat and salvage needs by using a comparison of the current condition (i.e. post-fire condition) to the desired conditions for snags on the landscape in order to inform what level of salvage harvesting would be appropriate in an area.

145. **Concern Statement:** The Forest Service should coordinate with affected counties to identify areas for salvage logging.

Response: Salvage harvesting can potentially play a constructive role in terms of economic benefits, fuels management and reforestation, however, the need for salvage will also have to be balanced against the desired conditions for specific types of wildlife habitat as well as any resulting negative side effects. The specific areas requiring salvage treatment under the new planning period would be identified and prioritized in the context of the Plans' desired conditions during future project-level planning efforts. We would welcome the participation of affected County governments in those processes as they occur in the future.

146. **Concern Statement:** The Forest Service should limit or eliminate salvage logging and develop plan components to define if, how, when and why salvage will be conducted by each burn severity class and patch size in order to preserve desired conditions and protect soils, aquatic resources, natural processes, snags, and complex early-seral habitat.

    Response: Salvage harvesting can potentially play a constructive role in terms of economic benefits, fuels management and forest regeneration; however, the need for salvage will also have to be balanced against the desired conditions for specific types of wildlife habitat (such as recently burned dense forest) as well as any resulting resource effects. The final revised Forest Plans are designed to balance habitat and salvage needs by using a comparison of the current condition (i.e. post-fire condition) to the desired conditions for snags on the landscape in order to inform what level of salvage harvesting would be appropriate in an area. Additional discussion of the role of salvage harvesting in the timber production program and in terms of ecological resilience has been included within those sections of Chapter 3 in the Final Environmental Impact Statement. The ecological concerns raised about salvage harvesting typically involve effects to soils, terrestrial wildlife, riparian systems and aquatic ecology. Many of these concerns can be mitigated with well-designed and properly implemented projects, but the potential effects to these resource areas are discussed within other sections of the Final Environmental Impact Statement.

Forest Management: Snags

147. **Concern Statement:** The Forest Service should re-evaluate large snag density across the landscape (including wilderness and roadless areas) and consider the high level of snags from recent disturbances. The Forest Service should base the desired condition for snags on current snag density, scientific information about proper snag levels, and modeling. No diameter limits for snag retention should be used.

    Response: The desired conditions and guidelines related to snag retention recognize the important role that snags play in terms of habitat and they address the potential loss of snags that could result from certain vegetation management activities. The desired conditions for snag retention included in the final revised Forest Plans represent revisions of the desired conditions that were included in the draft Forest Plan. The desired conditions in the final revised Forest Plans were developed using a science-based analysis of plot data contained in the DecAID database. Additionally, a natural range of variability analysis was completed to provide an ecologically based framework to characterize the natural level of recently burned forest land.

    Plan components included in the final revised Forest Plans related to snag retention and salvage harvesting avoid using many of the wholesale restrictions, like diameter limits, that were included in the draft Forest Plan. The final revised Forest Plans are designed to

balance habitat and salvage needs by using a comparison of the current condition (for example, post-fire condition) to the desired conditions for snags on the landscape in order to inform what level of salvage harvesting would be appropriate in an area.

148. **Concern Statement:** The Forest Service should assess how the retention of additional snags will impact firewood gathering.

    Response: The desired conditions of the Forest Plans include providing a variety of forest products, such as firewood and also providing non-timber forest products, such as berries and mushrooms in sustainable amounts for public use. The final revised Forest Plans include some restrictions on firewood gathering in areas like riparian management zones and special botanical areas. The revised Forest Plans provide the basis for subsequent site-specific, project-level decisions to be made, but site-specific restrictions on firewood gathering would be determined by individual ranger districts on a case-by-case basis. Firewood gathering is permitted largely in response to demand and is expected to continue at levels similar to those seen in the recent past.

149. **Concern Statement:** The Forest Service should retain Eastside Screen protections for snags and should assess various levels of protection for coarse woody debris. The Forest Service should retain all snags greater than 21-inch diameter at breast height and 50 percent of snags between 12-inch and 21-inch diameter at breast height.

    Response: The revised Forest Plans contain desired conditions shown in tables that detail the levels of retained snags and down woody debris that are wanted across the forest landscape. These desired condition tables cover ranges for retained smaller snag size classes as well as snags over 20-inches diameter. Additional guidelines are included in the revised Plans that will require management activities like salvage logging projects to be balanced with the need to leave standing and down wood for sediment and flood control, as well as habitat for populations of species that depend on snags or woody debris. Plan components included in the revised Forest Plans related to snag retention and salvage harvesting avoid using many of the wholesale restrictions that were included in the draft Forest Plans, but reflect an approach that is informed by the best available science and an analysis of the historical range of variability. The revised Forest Plans are designed to balance habitat and management needs by using a comparison of the current condition to the desired conditions for snags and downed wood on the landscape to inform what level and type of management activities would be appropriate in an area.

Forest Management: VDDT Model

150. **Concern Statement:** The Forest Service should not rely on Vegetation Dynamics Development Tool modeling as it is not based on local, ground-truthed data so the conclusions are not reliable. In addition, the Forest Service should clarify the data sets and base assumptions used for the Vegetation Dynamics Development Tool modeling (especially related to pre-European settlement conditions, wildfire occurrence and forest mortality from wildfire).

    Response: The existing condition of the forest vegetation was characterized by examining existing vegetation polygon data for the three National Forests. The existing vegetation database contains summarized information for each of the polygons mapped on their respective vegetation layers. Data sources include walk-through examinations, photo-interpretation, intensive stand examination plot data, and Most Similar Neighbor modeling. The Vegetation Dynamics Development Tool model is a state and transition

model that was used to simulate the effects of future management, disturbances, and natural succession over time. It was also used to develop the historical range of variability. All of the initial condition vegetation data sets and base assumptions used in the modeling were applied consistently across all of the alternatives. As a result, the different output sets for the alternatives were reflective of the relative differences between the various management strategies and proposed plan components. This enabled the results to be used to support decisionmaking between the alternatives.

While admittedly imperfect, as all models are, this modeling program was developed by a cadre of multiple ecological scientists in order to evaluate the effects of disturbance regimes over time and develop a range of variation for forest conditions based on those effects. The Vegetation Dynamics Development Tool model was designed to project changes in vegetation over long periods of time, based on the combined effects of forest succession, natural disturbance events, and management activities. The interaction of these factors can be quite complex and sometimes counterintuitive, but projecting these changes and incorporating how they interact with one another is a very important part of a landscape scale analysis. All of the results of the models were interpreted by various interdisciplinary experts, and were used to provide comparison information sufficient to make a reasoned choice among alternatives.

Using computer models to quantify the natural historical range of variability is a common method. It involves using the models to simulate historical dynamics to produce a time series of simulated data to compute historical range of variability statistics and metrics. This approach relies on the best available science based on understanding of natural forest succession and disturbance processes. The methods used for this analysis were generally consistent with previous historical range of variability characterizations completed by scientists in the inland Northwest. Additional information regarding the role of the Vegetation Dynamics Development Tool modeling was added to the "Forested Vegetation" section of Chapter 3 in the Final Environmental Impact Statement, and the section was reorganized to improve clarity and readability.

Timber: Allowable Sale Quantity and Timber Sale Program Quantity

151. **Concern Statement:** The Forest Service should use realistic timber harvest numbers to help create more trust of agency leadership and employees. The Blue Mountains Forests have not met or barely met the timber harvest goals in the current forest plans, and the new plans propose to increase those numbers.

    Response: Several different programmatic timber harvest schedules and resulting volume levels are developed during a forest plan revision, including the allowable sale quantity and the timber sale program quantity. The allowable sale quantity is the upper limit of the amount of timber volume potentially available for harvest on forestlands suitable for timber production during a specified time period, and its estimation is not constrained by assumptions about capacity. The timber sale program quantity is the actual planned objective level of harvest volume for each alternative, assuming full implementation. The actual volume offered over the next planning period would be the aggregate of individual project proposals, and would be dependent upon a number of factors, including annual budget and organizational capabilities. Some of the "full implementation" timber sale program quantity harvest schedules and resulting volume levels would represent substantial increases over the levels produced in recent years.

This is largely a result of the recognition that the rate and scale at which active management has been attempting to move toward desired conditions has not kept up with the impacts resulting from continued forest ingrowth, fuel accumulation and a changing climate. As a result, several of the alternatives, including Alternative E-Modified, were designed to support an increased pace and scale of restoration, and would thus result in increased timber volumes if they were fully funded and implemented.

152. **Concern Statement:** The Forest Service should update its analysis to accurately reflect current harvest levels, including the broadly supported 75 million board feet Malheur timber program target.

    Response: The depiction of recent harvest levels has been updated within the final Environmental Impact Statement to depict more recent timber volumes for the three National Forests.

    The large-scale 10-year Stewardship Contract that was awarded by the Malheur National Forest in 2013 was developed and is being implemented under the provisions of the 1990 Forest Plan, until such time as the revised forest plans are finalized.

153. **Concern Statement:** The Forest Service should base harvest level on the level of management needed to restore the proper range of variability.

    Response: The estimated harvest and related treatment schedules behind the allowable sale quantity and timber sale program objectives were not prepared in isolation from the other desired conditions and multiple-use objectives of the plan alternatives. The Forest Service agrees that the timber harvesting program, as well as other silvicultural treatments, should be used as tools to improve the ecological condition of the national forests. All the harvest schedules of the eight fully developed alternatives were designed to maintain or move the forest vegetation toward the desired conditions, which are based on the natural range of variability. The Environmental Consequences sections discussing "Forested Vegetation," "Ecological Resilience," and "Old Forest," all found in Chapter 3 of the Final Environmental Impact Statement, provide more detail regarding the relative effects of the different alternatives in terms of achieving desired conditions and improving ecological resilience. The potential impacts of harvesting and other forestry treatments are also addressed in other relevant resource area sections of Chapter 3, under topics such as soil, water, aquatic resources, and terrestrial wildlife habitat.

    Analysis of harvest scheduling to estimate forest product output levels is not limited to being a timber volume optimization exercise, but also considered and evaluated the ability of the harvests to move toward or maintain a set of desired conditions through sustained silvicultural activity over a long time horizon. Most of the desired conditions related to forest vegetation, insect and disease susceptibility and wildfire regimes were related to the historical range of variability. In addition to providing timber products, these desired conditions and related design elements also include reducing the risk of uncharacteristic fire, reducing insect and disease susceptibility, providing habitat for specific species and controlling the cumulative impact of harvest activity to maintain watershed health. All of these considerations can provide reasons for timber harvest activities, but also may impose limitations on the harvest schedule.

154. **Concern Statement:** The Forest Service should lower the allowable sale quantity to account for expected losses from wildfire, to store carbon, and to support viability of species associated with dense forests and dead wood. In addition, the Forest Service

should acknowledge the small diameter of most trees currently on the landscape and the lack of commercial viability in harvesting such stands. The proposed pace of logging is ecologically unsustainable.

Response: All of the allowable sale quantity levels associated with the eight alternatives analyzed in full in the Final Environmental Impact Statement represent reductions from the allowable sale quantity levels of the 1990 plans. With the inclusion of two additional plan revision alternatives, including a "departure" alternative, the range of timber harvest schedules that was explored among the different alternatives is considerable.

The modeling done to develop the harvest schedules and related timber outputs included the context of anticipated natural disturbance effects, and was run on a data set that represented the current condition of the three National Forests. All of the alternatives (with the exception of Alternative E-Modified Departure) were designed to harvest volumes within the long-term sustained yield capacity of each respective National Forest. The long-term sustained yield represents the maximum amount of timber volume that can be sustainably harvested from the lands suitable for timber production under a specific management regime consistent with other multiple-use objectives. The base timber harvest schedules of all of the alternatives were also designed to be able to provide a non-declining flow of sustainable forest products for at least the next five decades. The one exception to this scenario was Alternative E-Modified Departure, which was developed and included in the Final Environmental Impact Statement. Alternative E-Modified Departure's allowable sale quantity was purposely developed outside of the constraints of non-declining flow and it was allowed to temporarily exceed the long-term sustained yield capacity in order to explore the effects of using this management approach. Because of the current high degree of disparity between the desired conditions for forest vegetation, fire regimes and insect and disease susceptibility compared with the present state of the National Forests, it was believed that the consideration of a departure alternative was warranted. (See "Ecological Resilience," "Forested Vegetation," and "Insect and Disease" sections of Chapter 3).

155. **Concern Statement:** The Forest Service should reduce the level of logging and manage forests as little as possible because the majority of the landscape is already over-managed.

Response: Many commenters expressed a desire for the revised forest plans to virtually eliminate timber harvesting and other human uses within the National Forests of the Blue Mountains. A variety of restoration and management strategies were considered. This minimum management alternative approach was considered as Alternative G, but not developed in detail. Outdoor recreation, range, and timber are all among the uses that the Multiple-Use Sustained Yield Act of 1960 requires the National Forests be administered for. This minimal approach would not address all the identified issues, and it would eliminate most of the multiple uses and benefits for which the National Forests were created. Alternative C was developed and analyzed in detail, and it presumes a significant shift away from active management, like harvesting, toward more use of passive restoration as a way to move the landscape toward the desired conditions. The discussion describing the effects of Alternative C and all the other alternatives in terms of achieving desired conditions is detailed in the Final Environmental Impact Statement, Environmental Consequences section of Chapter 3. The potential impacts of harvesting and other forestry treatments are addressed in relevant resource area sections of this document under topics such as soil, water, aquatic resources, and terrestrial wildlife habitat.

When thoughtfully designed to operate along with ecological processes, or even as surrogates to natural disturbances, forest management techniques like timber harvesting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions. It is true that most commonly used forest harvesting techniques were originally developed as part of classic silvicultural systems primarily concerned with producing and harvesting mature crops of timber products. Modern approaches to forest management now view timber harvest and other silvicultural techniques as restoration tools that can be used to modify stand structures, species composition, stand density, landscape patterns and potential fire behavior. This approach is sometimes referred to as "ecological forestry," or "emulation of natural disturbance," as it attempts to fully incorporate an understanding of natural disturbance and stand development processes. This concept of using forest management to emulate natural disturbance has been discussed within a growing body of science literature and is often recommended as a technique to help restore resilient forest conditions.

Timber: Standards and Guidelines

156. **Concern Statement:** The Forest Service should make standards FOR-1, FOR-2, FOR-3, FOR-5 into guidelines until forests can respond to disturbances within the historical range of variability.

    Response: The inclusion of these restrictions on timber harvesting represent the implementation of harvesting restrictions that are mandated by Federal statute (National Forest Management Act). However, as part of the development of the final revised Forest Plans, wording has been revised so that the extent of the restrictions is clearer, and is limited to only that which is required under the Federal regulations and Forest Service policy that implement these sections of the Act. Standard FOR-5 has been changed to a guideline and it has been clarified to make it clear that it only applies to even-aged harvesting on lands suitable to timber production. The other three standards were not changed to guidelines because timber harvest activities can only comply by being in accord with the explicit terms of the standard.

157. **Concern Statement:** Because economics should be a top priority, the Forest Service should remove Guideline FOR-8, which requires silvicultural treatments be developed through interdisciplinary review, and also prohibits harvest systems from being selected primarily because they yield the greatest dollar return or the greatest output of timber. .

    Response: The Forest Service has little flexibility in regards to implementing the prescriptive elements of the National Forest Management Act related to timber harvesting. The terms of the draft version of FOR-8 have been revised to comply with Federal regulations implementing portions of the National Forest Management Act, which requires that clearcutting and other even-aged harvests may be used only when developed through interdisciplinary review to assess the project's impacts through appropriate environmental documentation, and a finding that the project is consistent with the multiple uses of the general area. The final wording of FOR-8 has been refined to ensure that the extent of the restrictions is clear, and is limited to only that which is required under the Federal regulations. Because the revised Forest Plans must comply with the terms of these Federal regulations, this direction, which was presented as a guideline in the draft Plans, has been changed to a standard. An additional new standard has also been added to comply with Federal regulations implementing portions of the National Forest Management Act, which require that harvesting systems chosen for a

project shall not be selected primarily because they give the greatest dollar return or the greatest output of timber.

158. **Concern Statement:** The Forest Service should remove standard FOR-1 and FOR-2, which require special consideration for use of clearcuts and limit the size of clearcuts. Early seral stands are lacking on the landscape and the full spectrum of potential silvicultural techniques should be retained.

    Response: The inclusion of these restrictions on timber harvesting represent the implementation of harvesting restrictions that are mandated by Federal statute (National Forest Management Act). However, as part of the development of the final revised Forest Plans, wording has been revised so that the extent of the restrictions is clearer, and is limited to only that which is required under the Federal regulations and Forest Service policy, which implement these sections of the National Forest Management Act.

    These restrictions do allow for considerable management flexibility in regards to managing for desired conditions pertaining to early seral structural stages on the landscape. The plan components allow even-aged regeneration harvesting of units larger than 40 acres if they are considered likely to produce a more desirable combination of net public benefits. If that can be demonstrated, then harvest openings larger than 40 acres may be permitted on an individual timber sale basis after 60 days public notice and review by the Regional Forester. This maximum opening size limitation does not apply to areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm.

159. **Concern Statement:** The Forest Service should remove FOR-9, the guideline that calls for no irreversible damage to soils and watersheds, as it is unnecessary.

    Response: The inclusion of these restrictions on timber harvesting represents the implementation of harvesting restrictions that are mandated by Federal statute (National Forest Management Act). However, as part of the development of the final revised Forest Plans, their wording has been revised so that the extent of the restrictions is clearer, and is limited to only that which is required under the Federal regulations and Forest Service policy, which implement these sections of the National Forest Management Act.

160. **Concern Statement:** The Forest Service should consider the opportunity costs and trade-offs associated with the timber standards and guidelines and the 21-inch Rule.

    Response: The inclusion of the general restrictions on timber harvesting represent the implementation of harvesting restrictions that are mandated by Federal statute (National Forest Management Act). These restrictions fundamentally function as sideboards on the way timber harvesting projects are planned and implemented.

    The “21-inch rule” is actually management direction included by forest plan amendment as part of the 1990 Forest Plans. A wide range of alternative approaches to old forest management was explored within the alternatives analyzed in Final Environmental Impact Statement. The analysis examines opportunities and trade-offs associated with different types of management direction proposed under the different alternatives for the revised Forest Plans. Additional discussion regarding the pros and cons of the various approaches to old forest management, including the continuation of a 21-inch diameter limit, has been included in the “Old Forest” section of Chapter 3 of the Final Environmental Impact Statement. Plan components in the final revised Forest Plans are designed to allow sufficient management flexibility in order to address desired

conditions for forest vegetation structure class, density and species composition as well as those pertaining to old forest.

161. **Concern Statement:** The Forest Service should create a standard or guideline to ensure economically viable forestry and range projects within the General Forest Management Areas (MA 4A).

    Response: The issue of cost effectiveness certainly will be considered during future project planning and prioritization, but it is outside the scope of a forest plan revision to ensure that all future forestry projects are economically viable. Broad-scale economic forces affecting timber, labor, and fuel prices along with forest product markets cannot be controlled or predicted by the final revised Forest Plans. Also, Federal regulations implementing portions of the National Forest Management Act dictate that the harvesting systems chosen for a project shall not be selected primarily because they give the greatest dollar return or the greatest output of timber. The overall intent of the final revised Forest Plans is to focus restoration on where it is most needed, but the specific areas requiring and being scheduled for active treatment would be identified and prioritized in the context of the Plan's desired conditions during future project-level planning efforts. The financial or economic efficiency of different project alternatives would be evaluated and compared at that time as part of the project-level decision-making process.

Timber: Suitability

162. **Concern Statement:** The Forest Service should deem more land suitable for timber harvest and should clarify its rationale as to why there is less land suitable for timber harvest in the new forest plan compared to the current forest plans. Only 35 percent of the planning area is considered suitable for timber production yet 60 percent has a moderate to high potential for uncharacteristically severe wildlife. In addition, many of the areas designated unsuitable for timber harvest may be more productive and higher quality than some of the suitable areas.

    Response: The discussion and explanation related to the determination of which lands are suitable for timber production and which other lands are suitable for timber harvest has been improved in the Final Environmental Impact Statement. This information can be found within the "Timber and Forest Products" section of Chapter 3.

    As part of the forest plan revision, a timber suitability analysis following the requirements of the National Forest Management Act was completed. This process is basically a series of subtractions of land from the total forest land base using four broad categories to identify lands not available for timber production (such as areas withdrawn by Congress, areas incapable of supporting forest, areas physically inappropriate and areas that cannot readily be restocked). Forestlands remaining after identifying and subtracting these subsets of unsuitable forestlands described above are those that are tentatively available for and potentially capable of being classified for timber production. Since the adoption of the 1990 Forest Land and Resource Management Plans, many changes to timber suitability have occurred. For example, the final adoption of Federal regulations for the protection of inventoried roadless areas resulted in large areas, which were included as timber production areas in the 1990 plans no longer being considered suitable for timber production.

    Each alternative started with these areas identified as tentatively suitable for timber production. Design parameters for each alternative resulted in further subtractions from

the tentatively suitable acres to determine the final acres suitable for timber production. Under most of the alternatives, the objectives of areas like riparian management zones, old forest stands, research natural areas and other backcountry areas were not considered compatible with regularly scheduled timber production.

It is also important to note that many of the areas not designated as suitable for timber production would still consider timber harvesting a generally suitable activity if it was necessary to achieve multiple use objectives other than regularly scheduled timber production. Timber harvest may be the best tool to accomplish fuels reduction, vegetation improvement, or some other management objective.

163. **Concern Statement:** All non-wilderness lands should be considered suitable for timber harvest, including backcountry areas, inventoried roadless areas, and riparian habitat conservation areas. Management Area 4C, Old Forest, should also be suitable.

    Response: The final revised Forest Plans consider timber harvesting as a management tool to be a generally suitable activity within most areas outside of wilderness. Under most of the alternatives, the objectives of areas like riparian management zones, old forest stands, research natural areas, and other backcountry areas were not considered compatible with regularly scheduled timber production. However, many of these areas would still consider timber harvesting a generally suitable activity if it was necessary to achieve multiple-use objectives other than regularly scheduled timber production. If timber harvesting was determined to be the best tool to accomplish fuels reduction, change forest structures, or meet some other resource objective, it could be considered for use, subject to any other restrictions specific to those areas.

164. **Concern Statement:** The Forest Service should designate more areas as suitable for timber to increase contributions to local economies and support forest sector infrastructure and county governments.

    Response: Between the eight different alternatives that were fully developed and analyzed, the range of areas considered as suitable for timber production is considerable. The range varied between Alternative C, with around 1.1 million acres (all three National Forests) of suitable timber production land to Alternative D, with almost 2.5 million acres designated as suitable for timber production. All of the alternatives were constrained by significant amounts of forest land being eliminated from consideration as suitable for timber production due to regulations related to the protection of inventoried roadless areas.

    Under most of the alternatives, and within the final revised Forest Plans, the objectives of areas like riparian management zones, old forest stands, research natural areas, and other backcountry areas were not considered compatible with regularly scheduled timber production. While little timber harvesting is expected to occur within these areas, if removal of products for commercial value is decided as the best means to meet the desired conditions for the forest vegetation of these areas, any timber product outputs that resulted from those restoration treatments could also be available to contribute to local economies and industry infrastructure.

165. **Concern Statement:** The Forest Service should prohibit commercial logging in old forests, potential wilderness areas, roadless areas, riparian zones, backcountry areas (Management Areas 3A and 3B), and riparian habitat conservation areas.

    Response: Timber harvesting would not be allowed in existing or recommended wilderness areas. Within areas of the National Forests that are allocated to management

areas like backcountry, or riparian areas, little, if any, timber harvesting is expected to occur. Timber harvesting would not be allowed within these areas for the purpose of increasing timber production, but could still be allowed if it was determined to be the best way to achieve the management objectives of those specific areas. Any potential tree cutting activities within inventoried roadless areas would also remain subject to existing Federal regulations regarding the protection of those areas. When thoughtfully designed to operate along with ecological processes, or even as surrogates to natural disturbances, forest management techniques like timber harvesting can be useful tools to help manage and move forest vegetation conditions toward the desired conditions.

Grazing

Grazing: Allotment Monitoring and Compliance

166. **Concern Statement:** The Forest Service should develop a more comprehensive, representative monitoring strategy, including quantitative measures and enforceable benchmarks that would trigger changes in grazing levels or suspension or elimination of grazing. The agency should monitor allotments to ensure compliance with regulations.

    Response: The Forest Service uses nationally accepted monitoring protocols such as those in the Bureau of Land Management Technical references 1737-23 and BLM/RS/ST-96/004+1730. Site-specific allotment monitoring and frequencies are determined at the allotment management plan level and through the environmental analysis process, or through the Endangered Species Act consultation process.

167. **Concern Statement:** The Forest Service should enforce off-dates and cancel allotments when standards are not being met.

    Response: These are administrative issues, dealt with through a specific non-compliance process identified in Forest Service Handbook 2209.13.

168. **Concern Statement:** The Forest Service should coordinate with counties and permittees to determine a science-based monitoring method.

    Response: The protocols each National Forest uses for monitoring are nationally accepted by the Forest Service, but we welcome any science-based monitoring methodology submitted for review. Permittees and counties are welcome to participate in the development of allotment management plan monitoring strategies through the appropriate process.

169. **Concern Statement:** The Forest Service should not use PACFISH-INFISH Biological Opinion parameters for individual sites as they were developed for use on a regional scale.

    Response: We agree that the established PACFISH-INFISH Biological Opinion statistical sampling protocol was set up first and foremost to detect statistically valid trends in PACFISH-INFISH Biological Opinion parameters at the scale of the Interior Columbia River Basin. The fisheries biologists who developed the protocol have tested their methods over the years in terms of statistical reliability. As more data are collected at individual sites and across individual national forests and watersheds over time through repeat sampling per the established protocol, the statistics to determine trends at smaller scales such as individual sites become more robust and the data become

more useable at those smaller scales for that purpose. The most recent reports (2016) for individual national forests are beginning to detect statistically reliable trends for some parameters at the national forest scale, and in some cases at the subbasin scale or reach-scale within an individual national forest. Allotments with federally listed species are required to consult on the grazing activity, where site-specific data is used to determine site-specific indicators for monitoring, and the allowable use associated with them.

Grazing: Animal Unit Months (AUMs) and Production

170. **Concern Statement:** The Forest Service should use a more accurate method for estimating total animal unit months available in each alternative (such as through long-term trend monitoring and field data). The Forest Service should clarify both capacity and current use information and ensure consistency in these numbers.

    Response: Animal unit months were based on permitted livestock numbers for 2013. The animal unit months were obtained from a report in the Natural Resource Management Infra database, based on the permitted use. These numbers were provided to all specialists for their resource sections.

171. **Concern Statement:** The Forest Service should address why estimated animal unit months in the plans are less than current grazing levels yet the Environmental Impact Statement states there is no anticipated reduction in grazing.

    Response: Animal unit months were based on permitted livestock numbers for 2013. Permitted numbers may be higher than authorized numbers on any given year due to non-use by permittees. The Natural Resource Management database was used to compile these numbers. Decreases reflected in these numbers may indicate an active allotment becoming vacant through the waiver of the permit back to the Forest Service, or a recent allotment decision, which may have changed animal unit month numbers, or season of use. Reductions would occur at the allotment management plan level, not in the Forest Plans.

172. **Concern Statement:** The Forest Service should maximize the level of grazing and plan for range improvement to provide more forage.

    Response: At least one alternative includes the acreage of both active and vacant allotments, which would be the maximum capacity or use. Projects to improve rangeland forage would occur at the ranger district level.

173. **Concern Statement:** The Forest Service should clip and weigh forage as a basic part of allotment management rather than relying on Holechek estimates of forage production that are inappropriate for Blue Mountains forests.

    Response: Forage production and utilization analysis methodologies are described in the "Livestock Grazing and Grazing Land Vegetation" section, referencing the data and analysis of Countryman, Justice, and Quimby specifically for the Blue Mountains plant species. Best available science was used to determine appropriate allowable use levels for forage species.

Grazing: Benefits

174. **Concern Statement:** The Forest Service should recognize the benefits of grazing, including economic and social well-being of communities, weed control, fine fuels

reduction, forage improvements, water improvements for wild ungulates, and potentially increased species richness.

Response: Existing monitoring data is used to present the current effects of livestock grazing on the National Forests. That information and information related to the effects of the plan revision alternatives on the National Forests and surrounding communities is presented in the "Livestock Grazing and Grazing Land Vegetation" and the "Economic and Social Well-being" sections in the Final Environmental Impact Statement. The effects discussion also indicates that with the implementation of best management practices and other grazing management undesirable effects are mitigated, though it also points out some areas that need improvement from past effects.

Grazing: Climate Change

175. **Concern Statement:** The Forest Service should analyze how grazing could exacerbate the effect of climate change on resources such as riparian vegetation, water turbidity, and stream temperatures.

    Response: Climate change effects on the aquatic environment are discussed in the Climate Change section of the Final Environmental Impact Statement. Rangeland carbon stocks are lower than forests and are less directly affected by rangeland management practices than timber harvests in forestlands (U.S. EPA 2011).

Grazing: Current and Desired Condition

176. **Concern Statement:** The Forest Service should not use "natural conditions" as the desired condition as it is not achievable. Nonnative plant species should not be excluded from the desired condition.

    Response: The desired condition is described as, "Rangelands reflect native or desired nonnative plant composition and cover at near-natural levels defined by the site potential." This includes nonnative plant species and the rate is near-natural levels, which we believe to be achievable since the current forest plant composition contains native plants in most cases.

177. **Concern Statement:** The Forest Service should develop desired conditions for improving the ecological state of sensitive areas like springs, headwater streams, and grasslands.

    Response: There are desired conditions for springs, headwaters and grasslands described in the Forest Plans in 1.2 Watershed Function, 1.1.3 Wetland Function, and 1.7 Plant Species Composition.

178. **Concern Statement:** The Forest Service should better assess current conditions (for example by using field data) and should provide information supporting the claim that the current desired condition and trend is undesired or in the wrong direction.

    Response: Existing monitoring data is used to describe the effects of permitted livestock grazing on the National Forests. That information is presented in the "Livestock Grazing and Grazing Land Vegetation" section in the Final Environmental Impact Statement. Livestock grazing has the potential to impact forest resources and that potential is also portrayed in the effects discussion. The effects discussion also indicates that with the implementation of best management practices and other grazing management,

undesirable effects are mitigated. The Environmental Impact Statement effects discussion also points out some areas that need improvement from past impacts.

Grazing: Fees/Permits

179. **Concern Statement:** The Forest Service should charge more for range permits or range improvements on public lands.

    Response: The question of fees on National Forest System lands is outside of the scope of a Forest Plan revision. The formula used for calculating the grazing fee, which was established by Congress in the 1978 Public Rangelands Improvement Act, has continued under a presidential Executive Order issued in 1986. Under that order, the grazing fee cannot fall below $1.35 per animal unit month, and any increase or decrease cannot exceed 25 percent of the previous year's level.

Grazing: Fire

180. **Concern Statement:** The Forest Service should completely exclude livestock from burned areas after a fire for up to five years or more after a fire.

    Response: Both the Draft and Final Environmental Impact Statements include a "Fire Exclusion and Extinguishment" section in the Affected Environment of the "Livestock Grazing and Grazing Land Vegetation" section. The impacts of grazing management before and after a fire have a dramatic effect on the response of vegetation to the fire and to what can be expected in the long term. The need for increased intensity of grazing management on burned areas can be understood by realizing the potential change in the plant community and associated animal response that can result from a burn (Clark and Miller 2001).

    The response of individual plant species to fire varies significantly between and within species. This response is influenced by a variety of fire parameters, including intensity, severity (influencing amount of organic matter consumed), residence time, soil heating, season of burn, and time since last fire. These parameters can vary significantly among fires and within a fire. These variations can and will cause differences in the response of individual species and the community as a whole. In addition, numerous physical and climatic factors (such as fuel condition, weather, slope, and aspect), as well as biological factors (plant morphology and physiology) will influence post-fire effects on plant communities. This includes direct effects, such as the ability of individual species to recover from the effects of fire.

    Expected recovery potential is a function of fire severity. Johnson (1998) reported that in lightly burned areas (low severity fires) the expected recovery is fairly quick and a natural recovery of one to two years would be expected. Moderately burned areas (medium severity fires) have a modest recovery rate of two to five years. Heavily burned (high severity fires) have a slow natural recovery and may require five or more years to recover.

181. **Concern Statement:** The Forest Service should allow for site-specific prescriptions for grazing after wildfire.

    Response: Both the Draft and Final Environmental Impact Statements include a "Fire Exclusion and Extinguishment" section in the Affected Environment of the "Livestock Grazing and Grazing Land Vegetation" section. See the response above for more information.

182. **Concern Statement:** The Forest Service should change guideline RNG-1 G-43 to a standard and modify it to state that grazing after wildland fire will be deferred until vegetation recovers to a condition where grazing will not cause a downward trend in key species.

    Response: Standards are mandatory constraints upon project and activity decisionmaking. They are established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

    Guidelines are a constraint on project and activity decisionmaking that allow for departure from its terms (flexibility), so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. Guidelines serve the same purpose as standards but they differ from standards in that they provide flexibility in defining compliance, while standards are absolute constraints.

    It would not be appropriate to make this a standard because factors such as fire intensity and vegetation composition make the timing of grazing reintroduction after a wildland fire highly variable.

183. **Concern Statement:** The Forest Service should encourage grazing to reduce fuel loads and fire risk.

    Response: In the short-term, livestock grazing can result in reduced fire frequency within an area, by reducing herbaceous surface fuel loads and creating denuded areas that can act as firebreaks. However, a great deal of scientific evidence exists suggesting that over longer time frames, grazing within many western forests may actually contribute to unintended negative consequences in terms of fire behavior and forest health. Many of the ponderosa pine and mixed-conifer forests that are typical of the Blue Mountains region have undergone substantial structural and compositional changes since settlement of the West. Many of these changes have resulted in impacts in terms of increased vulnerability to severe fire and susceptibility to insect and disease outbreaks. Historically, these forests largely consisted of widely spaced, fire-tolerant trees underlain by dense grass. Over the last 100 years, they have developed into dense stands consisting of more fire-sensitive and disease-susceptible species. Livestock grazing has contributed to these problems because livestock consume and lower the density of grasses that would otherwise compete with and regulate the development of new tree seedlings. Livestock also remove the herbaceous understory, which historically would have provided fuel for frequent mild surface fires that would normally kill and thin out regenerating trees. As this process continues over time, in conjunction with aggressive suppression of natural fire starts, forest stands previously dominated by fire-tolerant species such as ponderosa pine and western larch shift to dominance by Douglas-fir and true fir species. This process is also exacerbated by selective logging of the original large, fire resistant trees. The individuals within these crowded new stands of smaller trees and saplings compete intensely with each other, and consequently have a reduced ability to fend off attacks by forest insects and diseases. These dense multi-storied structures also tend to support uncharacteristically severe fire behavior when suppression efforts are no longer able to be effective, and long excluded fire returns to the area.

Grazing: Listed and Sensitive Plant Species

184. **Concern Statement:** The Forest Service should drop the standards that restrict grazing timing and location to protect Spalding's catchfly (PL-TES-1 and PL-TES-2) because it severely limits flexibility to manage the range resource, is duplicative of guidance to avoid listed plant species when possible, and is inappropriate for a species that thrives after disturbance. The relationship between grazing and Spalding's catchfly populations is unclear and grazing shouldn't automatically be assumed to be a threat. The Forest Service should not require a conservation strategy, agreement or recovery plan for the species. Rather than restrictions, the Forest Service should intensively monitor the sites to see if any change in grazing is needed or should fence sites.

    Response: To simplify management while ensuring the continued viability and recovery of Spalding's catchfly, the Forest Service modified Alternative E and omitted the standard that would have not authorized grazing in pastures that were moderately or more departed from the desired conditions for grasslands. Alternative E-Modified would adjust the season of use within occupied habitat to exclude the catchfly's flowering-fruiting period, which is approximately from July 1 to September 30. This would allow catchfly flowers to be pollinated and its seed to ripen and disperse.

185. **Concern Statement:** The Forest Service should manage grazing to protect sensitive plant species and communities, such as Spalding's catchfly and should classify all areas containing known populations of Spalding's catchfly as unsuitable for livestock grazing. Instead, such areas should be classified as botanical areas.

    Response: Standards and guidelines were developed to help maintain or achieve desired conditions. An analysis of how plan components (including standards and guidelines for all alternatives) is found in Chapter 3 of the Final Environmental Impact Statement. Alternative E was modified to adjust the timing of grazing in occupied Spalding's catchfly habitat. Grazing would not be authorized in occupied habitat of Spalding's catchfly from July 1 through September 30 to allow catchfly plants to complete flowering, seed set and dispersal. A separate standard would limit grazing outside this period to a maximum 30 percent of key forage species to maintain or move the species' grassland habitat toward desired conditions and maintain ample pollinator habitat. See Volume 1, Chapter 3 of the Final Environmental Impact Statement for the complete discussion and analysis.

186. **Concern Statement:** The Forest Service should assess the impact of grazing on Spalding's catchfly populations at the project level rather than creating detailed prescriptions in the Forest Plans.

    Response: Standards and guidelines were developed to help maintain or achieve desired conditions. Guidelines provide managers flexibility, during project-level design and analysis, to achieve the intent of the guideline. Standards, while mandatory, are practices that are necessary to maintain or move toward desired conditions in every situation regardless of a given location at the project level. An analysis of how plan components (including standards and guidelines for all alternatives) achieve desired conditions for Spalding's catchfly is found in Chapter 3 of the Final Environmental Impact Statement.

187. **Concern Statement:** The Forest Service should eliminate guidelines discouraging grazing in fen and bog plant habitats (PL-TES-3); limiting utilization in habitat for threatened, endangered, and sensitive plants (PL-TES-4); and discouraging water

developing within a quarter of a mile of threatened, endangered, or sensitive plant species (PL-TES-5).

Response: Alternatives C and D have no standards or guidelines restricting grazing in fen habitats or restricting water development within one-quarter mile of occupied habitat for threatened, endangered, or sensitive plant species or limiting utilization levels of key forage species within occupied habitat of threatened, endangered, or sensitive plant species. Standards and guidelines for other action alternatives were developed to help maintain or achieve desired conditions. Peatlands, which include fen and bog habitats, are too fragile to support livestock grazing. The intent of the guideline restricting water development near threatened, endangered and sensitive plants is to avoid concentrating livestock in these locations. Given uncertainties around the levels of grazing that can be sustained by threatened, endangered and sensitive plants, a level of 30 percent maximum utilization, which is characterized as the upper limit of "light" grazing, provides these species a margin of protection over higher use levels (e.g., 50% utilization for uplands). An analysis of how plan components (including standards and guidelines) achieve desired conditions, for all alternatives, is found in Chapter 3 of the Final Environmental Impact Statement.

Grazing: Modeling

188. **Concern Statement:** The Forest Service should use an inventory and sampling approach rather than state and transition modeling, which doesn't accurately reflect conditions on the ground or reduced cattle use on steeper grounds, for instance. Alternately, models should be used with caution and verified. In addition, the analysis should describe vegetation plots used, how reference areas were selected, and the number of plots used for each vegetation category.

    Response: Long-term condition and trend vegetation monitoring data is used to determine which plant community may fall into in the State and Transition model. These determinations are made at the site-specific allotment management plan and environmental analysis level, not in the Forest Plans.

189. **Concern Statement:** The Forest Service should not use the concepts of 'phases model' and 'state and transition model' interchangeably.

    Response: The Final Environmental Impact Statement has had more language and a schematic added to further explain that phases are part of a state and transition model to better clarify the discussion and relationship between phases, models, and states when vegetation is mentioned in "Issue 3: Livestock Grazing and Grazing Land Vegetation."

Grazing: No Reduction or Restrictions

190. **Concern Statement:** The Forest Service should not reduce livestock grazing as it would affect county revenues and detract from the Forest Service's multiple-use balance.

    Response: Livestock grazing is proposed in every alternative. Some alternatives have a lesser emphasis, or more areas of restriction. Potential reductions to animal unit months would occur at the allotment management plan and environmental analysis level, not in the Forest Plans. Alternatives E-Modified and E-Modified Departure both include vacant allotments and the historic animal unit months and suitable acres of rangelands.

191. **Concern Statement:** The Forest Service should not apply further unjustified grazing restrictions (for example, cutting cattle numbers, allowing only native grasses,

restricting utilization), especially in light of improved conditions under current standards and management practices.

Response: Current range management practices may be showing improvement in some areas, but may not in others. Desired conditions may not have been reached within the last planning period from 1990 to present. Standards and guidelines have been developed to move us toward attainment of desired conditions.

192. **Concern Statement:** The Forest Service should not broadly blame cattle for multi-faceted resource issues (for example, poor riparian conditions or ineffective fish recovery) and should not consider all grazing to be unmanaged or poorly managed. In addition, the forest should not be viewed as currently "over-used."

Response: The text being referenced is one of four background sections that describe the documented watershed-related effects of forest roads, timber harvest (logging), fire, and livestock grazing as these are four of the prevalent uses on the National Forests that have effects on watershed conditions. The material is for background only and describes the kinds of effects, and potential magnitudes of effects, associated with each activity, but does not make conclusions as to the effect of livestock grazing in the Blue Mountains.

The watershed analysis recognizes that past land uses are often listed without reference to the magnitude of the effects of different land uses. Some details of these effects have been added to the watershed environmental consequences and cumulative effects sections of the Final Environmental Impact Statement.

Skovlin (1991), among others, cited several sources that describe historic range conditions of the Starkey range, the Wallowa Mountains, and western foothills of the Blue Mountains that describe heavy livestock use and heavily overgrazed range conditions that were documented between 1882 and 1900. Skovlin estimated that livestock numbers were reduced by about half between 1900 and 1910 and following the establishment of the Blue Mountains Forest Reserve. McIntosh (1992) reported that livestock numbers in the upper Grande Ronde River were reduced from 211,000 animal unit months in 1911 to 51,000 animal unit months in 1990 and 18,250 animal unit months in the same area as of 2013. Present (2013) livestock numbers represent a 96 percent reduction from 1900 levels and 91 percent reduction from levels at the time the national forests were established. This information is included in the watershed effects analysis of the Final Environmental Impact Statement.

Grazing: Range of Alternatives

193. **Concern Statement:** The Forest Service should consider a broader range of grazing alternatives including: (1) no grazing, (2) increasing herd numbers, (3) removing cattle from rangelands with streams containing listed fish species, (4) altering the amount of exclusions, and (5) requiring a minimum 6-inch stubble height.

Response: A broad range of alternatives are provided with various levels of grazing available, detailing suitable acres for livestock grazing and animal unit months for both sheep and cattle. These alternatives are compared and broken down by National Forest in the Comparison of Alternatives section in Volume 1 of the Environmental Impact Statement. The No Grazing Alternative was Alternative J, which was considered, but eliminated from detailed study because while the National Forest Management Act requires the Forest Service to address rangeland capability and suitability, stocking

decisions for specific grazing allotments are made through site-specific environmental analyses.

Grazing: Restocking Allotments

194. **Concern Statement:** The Forest Service should allow for the use of vacant allotments as a tool to increase management flexibility.

    Response: All vacant allotments are included in the suitable acres for grazing and animal unit months in Alternatives E-Modified and E-Modified Departure. Site-specific environmental analysis and Endangered Species Act consultation may be needed to reauthorize livestock grazing, independent of the Forest Plans, to determine appropriate capacities for these allotments if they have been vacant for a long period. Vacant allotments are listed in the Rescission Act schedule.

195. **Concern Statement:** The Forest Service should not allow livestock grazing to occur in vacant allotments, particularly without opportunity for public comment.

    Response: Forest Service Handbook 2209.13 gives the Forest Service the authority to stock vacant allotments in emergency situations until environmental analysis can be completed. Permanent stocking of these allotments will not occur without environmental analysis, which allows the public to comment during scoping.

Grazing: Restrict or Eliminate Grazing

196. **Concern Statement:** The Forest Service should reduce or eliminate grazing because of low ratings in survey plots; irreversible ecological impacts (soils, water quality, plant communities, wildlife, fish and hydrology); declines in suitable habitat for sensitive species; woody shrub recruitment; and difficulty achieving desired conditions for grasslands. A reduction in grazing would create healthy landscapes, restore fish and populations, protect water quality, protect soils (including water storage capacity), limit weed spread, restore sagebrush ecosystems, support recreation, and limit extensive and severe livestock damage.

    Response: The long-term Forest Service condition and trend data indicates improvement of vegetation conditions in most areas. The PACFISH-INFISH Biological Opinion data reports suggest similar improvement in fish habitat. Removal of livestock grazing would not eliminate effects from other ungulates or activities on the National Forests, and will not automatically improve conditions to a recovered or restored state ecologically. Some irreversible impacts were not caused by livestock grazing, but other historic practices. Some sensitive species require a certain level of stimulation to survive, and actually prefer grazed sites. The allotments with some areas of unsuitable for grazing acreage reflect areas the livestock trail through but don’t necessarily graze, or are fenced out administrative sites such as campgrounds.

    A wide range of alternatives is included in the analysis, with various levels of animal unit months and suitable rangelands acres.

197. **Concern Statement:** The Forest Service should significantly reduce grazing, for example 75 percent less animal unit months or cutting seasonal use by half.

    Response: Alternative C greatly reduces animal unit months by designating riparian management areas as unsuitable for livestock grazing. The Forest Service is required to consult with the U.S. Fish and Wildlife Service and National Oceanic Atmospheric

Administration, National Marine Fisheries Service for grazing activities, in which they have given us terms and conditions or accepted our mitigation measures, and supported our continuation of livestock grazing. The Forest Service has no data to support such a large reduction in animal unit months. Each allotment is analyzed individually to determine appropriate stocking levels and grazing seasons.

198. **Concern Statement:** The Forest Service should reduce the area considered suitable for livestock grazing. Grazing should not be suitable in areas with steep slopes, high canopy closure, low productivity, Phase D conditions (grasslands have crossed an ecological threshold), or reaches with federally listed fish. Additionally, there should be no livestock use in wilderness area, roadless areas, bighorn habitat, riparian areas, and seasonally saturated meadows with fine-grained non-cohesive soils and no woody vegetation. No grazing should be allowed in unsuitable areas.

    Response: The suitability and capability analysis described in the Methodology section of the "Livestock Grazing and Grazing Land Vegetation" section accounts for steep slopes, areas that produce less than 200 pounds per acre of forage, and other factors. These areas are considered unsuitable for livestock grazing: however, livestock may trail through them on an allotment. Stream reaches with federally listed fish are managed very intensively and coordinated through consultation with the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration/National Marine Fisheries Service. Other areas mentioned are managed intensively or are currently considered unsuitable for livestock grazing. The wilderness areas in the analysis have specific determinations as to whether livestock grazing was grandfathered into the area when it was designated.

199. **Concern Statement:** The Forest Service should consider complete elimination of grazing or multi-year rest to recover damaged riparian systems. The Forest Service should meet the requirements of Executive Order 11990 to minimize the destruction, loss and degradation of wetlands by cattle and sheep and preserve and enhance the natural values of wetlands.

    Response: We do not believe we have any of these areas that have been destroyed, lost or degraded. The Forest Service must follow all laws, regulations, and policy direction, such as the Clean Water Act, National Forest Management Act, State regulations, and Forest Service handbook and manual direction. This direction has not been repeated in standards or guidelines. Grazing authorizations are determined at the site-specific allotment level, requiring environmental analysis, including no grazing.

200. **Concern Statement:** The Forest Service should eliminate grazing in areas not meeting standards or where conditions have not improved substantially in the past two years. Available forage estimates should be based on historic minimum years to prevent damage during drought cycles; every third year should be a rest year.

    Response: Long-term condition and trend monitoring of rangeland and riparian vegetation shows improvement in most areas, but not in all. Desired conditions may not have been reached within the last planning period from 1990 to present. The Final Environmental Impact Statement developed desired conditions and goals, as well as standards and guidelines used to monitor progress toward attainment of desired conditions. Grazing systems are determined at the allotment and environmental analysis level, based on site-specific conditions.

201. **Concern Statement:** The Forest Service should eliminate livestock grazing in watersheds that don't meet substrate standards or where 10 percent or more of soils have been compacted. The Forest Service should incorporate a discussion of the impact of livestock grazing on water quality.

    Response: The elimination of grazing from any allotment is a site-specific decision that is made through allotment environmental analysis. The first request is taken from Rhodes et al. (1994, Table B), a report that is now more than 20 years old. Conditions have changed since the report was written. Livestock numbers have been reduced by as much as two-thirds; some allotments have been closed; more than 11,000 miles of roads have been closed and more than 2,000 miles of roads have been decommissioned, most of them since the Rhodes report was published.

    Livestock grazing is discussed in the Final Environmental Impact Statement with respect to water quality. As described in the analysis, the most recent (2012) 305(b) integrated report for Oregon lists 66 streams miles as water quality limited for Fecal Coliform or *E. coli* and 395 miles for unspecified Biological Criteria, which may be from sources other than livestock grazing.

    Livestock numbers have already been reduced to roughly one-third of 1990 levels and by more than 90 percent from 1910 levels. Livestock grazing remains a pervasive use on the National Forests but is only one of several past and ongoing land uses that have affected streams in the Blue Mountains (placer mining, stream channelization, splash dams, log drives, railroad logging, roads, logging, water diversions, floodplain conversion, and irrigated agriculture are among the others). Some past activities are no longer practiced, but continue to affect stream channel and riparian conditions in the Blue Mountains. Livestock grazing has been shown to be a source of soil compaction (Kauffman et al. 2004), but there are multiple other sources of impact on soils, erosion, and water quality within the National Forests. The Blue Mountains Aquatic and Riparian Conservation Strategy comprises Appendix A of the preferred alternative ("the Plan"). Guideline GM-3G focuses livestock concerns on watersheds where the preponderance of evidence for water quality, riparian and aquatic habitat indicators suggests that their conditions are less than optimal, and establishes specific timeframes for closer analysis and requires revised management of grazing to reduce any ongoing impacts that are slowing or preventing recovery for those indicators. Appendix B of the ARCS includes criteria for evaluating and identifying good substrate conditions, and outlines the process for revising those criteria when they do not fit inherent capabilities of a watershed or stream channel type or healthy sediment transport processes in certain landscape settings.

202. **Concern Statement:** The Forest Service should incorporate best available science in its analysis which shows that livestock grazing: alters forest dynamics, species composition, and natural fire regimes; reduces the biomass and density of understory grasses; alters forest ecosystem processes by reducing the cover of herbaceous plants and litter; disturbs and compacts soils, reducing water infiltration rates and increasing soil erosion; negatively affects water quality and seasonal quantity, stream channel morphology, hydrology, instream and stream vegetation and aquatic fish and wildlife.

    Response: The Final Environmental Impact Statement incorporates the best available science**.** The effects of livestock grazing to different resources are discussed separately in the sections covering topics such as watersheds, water quality, soils, forest vegetation, aquatics, plant species diversity, and wildlife. The historic effects of livestock grazing

are presented in the introductory and existing conditions sections in the "Livestock Grazing and Grazing Land Vegetation" section of the Final Environmental Impact Statement.

Grazing: Scale

203. **Concern Statement:** The Forest Service should analyze grazing at a site-specific scale because ecological impacts are washed out at too large of a scale. Decisions about animal unit months and grazing should take place site specifically under an allotment management plan Environmental Assessment.

    Response: The revised Forest Plans will not change current uses. Those uses may be modified by future site-specific analysis and decision-making as required by the National Environmental Policy Act. In the interim, implementation of the livestock grazing and grazing vegetation standards and guidelines will be consistent with the desired conditions described in the Plans, and consistent with current allotment management planning environmental analysis and/or consultation.

Grazing: Soils

204. **Concern Statement:** The Forest Service should revise its analysis of the impact of grazing on soils to include a soils map, a description of soil types, soil survey data, and data or literature to support its assumptions and conclusions, including that sites with over 40 percent slope are unsuitable for grazing.

    Response: A Forest Plan is a programmatic level document and as such does not include site-specific decision determinations. When projects are proposed at a site-specific allotment management plan level, each of the recommended items would be included in the associated environmental analysis before a determination can be made (for example, a soils map, with descriptions of the soil types, soil survey data, and data or literature to support assumptions and conclusions, along with areas that have slope gradients exceeding 40 percent). The exclusion of slopes greater than 40 percent is built into the Capability analysis described in the Methodology section of the "Livestock Grazing and Grazing Land Vegetation" section in the Final Environmental Impact Statement.

205. **Concern Statement:** The Forest Service should establish a soil quality index and measure indicators of soil health before, during and after grazing.

    Response: It is a normal practice for district range specialists to conduct range readiness surveys prior to livestock turnout on allotments, to make sure soils are not saturated and will not be impacted by grazing. There are standards and/or guidelines proposed for management of soils in the revised Plans.

Grazing: Spatial Data and Grazing Analysis

206. **Concern Statement:** The Forest Service should provide spatially explicit information on capability and suitability determinations.

    Response: A map of active and vacant allotments has been created and is included in the Final Environmental Impact Statement. The methodology for determining capability and suitability is included in the Final Environmental Impact Statement "Livestock Grazing and Grazing Land Vegetation" section.

207. **Concern Statement:** The Forest Service should incorporate recent science that acknowledges that changes in management have improved conditions. In addition, the

Forest Service should clearly demonstrate: (1) grazing actually has negative impacts on existing conditions, (2) exclusionary livestock fences are the most effective means for improving habitat (rather than managing for desired conditions, for example), (3) livestock actually trample redds, (4) cowbirds are a real issue within the plan area, (5) Johnson's research is relevant for extrapolating pounds per acre of forage, and (6) Countryman 2010 data methods are reliable. Finally, the Forest Service should use "best available science" to take all impacts into account, not just impacts from ranching.

Response: Long-term condition and trend monitoring of rangeland and riparian vegetation shows improvement in most areas, but not in all. Desired conditions may not have been reached within the last planning period from 1990 to present. The Draft and Final Environmental Impact Statements developed desired conditions and goals, as well as standards and guidelines to monitor progress toward attainment of desired conditions. The Aquatic and Riparian Conservation Strategy incorporates the best available science.

In response to items 1-4, existing monitoring data is used to present the current effects of livestock grazing on the National Forests. That information is presented in the "Livestock Grazing and Grazing Land Vegetation" section in the Final Environmental Impact Statement. Livestock grazing has the potential to impact forest resources and that potential is portrayed in the effects discussion. The effects discussion also indicates that with the implementation of best management practices and other grazing management those effects are mitigated, though it also points out some areas that need improvement from past impacts. We acknowledge that several uses other than grazing (for example, timber production, roads, or fire) cause riparian and other aquatic resource damage. All of these activities, including their consequences, are outlined and detailed in the Final Environmental Impact Statement under the various headings for those listed activities.

Johnson's ecology research and long-term monitoring of plant communities was instrumental in determining and documenting the plant community composition, condition, trend, and related production per acre. Countryman and Justice used local vegetation databases to analyze plant communities based on the vegetation data collected in the Blues Mountains.

Grazing: Standards and Guidelines

208. **Concern Statement:** The Forest Service should change all grazing guidelines to standards, including RNG-2 G-44, RNG-3 G-45, RNG-4 G-46, RNG-5, RNG-6 G-47, and RNG-7 (new).

    Response: In order to provide protection of resources, projects must follow all guidelines. A guideline is defined in the glossary as "a constraint on project and activity decision making that allows for departure from its terms, so long as the intent of the guideline is met (36 CFR 219.15(d)(3)). Guidelines are established to help achieve a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements." Guidelines are an important component of plan direction, allowing some flexibility (with proper documentation) while still providing guidance to protect resources. Guidelines are commitments that the National Forest staff will follow during plan implementation. The project analysis will document how the project is meeting all applicable guidelines.

209. **Concern Statement:** The Forest Service should eliminate Range Standards and Guidelines 1-19 because they are arbitrary and restrict management ability to respond to changing site-specific conditions.

Response: RNG-1, 2, 3, 4, 5, 6, 7, and 8 have been replaced by BHSM-1S, 2S, 3S, 4S, and 5S. These standards are designed to allow for management flexibility to use the best available science, while combining site-specific qualitative and quantitative factors that influence the risk of contact between domestic sheep and bighorn sheep. These standards and the areas identified as "suitable for domestic sheep grazing" will ensure that the Forest Service supports a domestic sheep grazing program in a manner that does not impeded the recovery of bighorn sheep.

210. **Concern Statement:** The Forest Service should eliminate the standard that prohibits trampling of redds by livestock (RMA-RNG-5, G-118).

    Response: This has been a requirement of the U.S. Fish and Wildlife Service and National Marine Fisheries Service since we began consulting with the Services for various listed fish species, starting in the 1990s with Snake River Basin Chinook salmon, followed by Snake River Basin and Middle Columbia River steelhead and Columbia River bull trout.

211. **Concern Statement:** The Forest Service should adjust guideline RNG-4 G-46 to clarify that grazing will only be allowed in suitable areas of grazing allotments (only 42 percent of acreage in allotments currently classified as suitable). The Forest Service should define "less than fully capable or suitable."

    Response: An allotment may contain both suitable and unsuitable areas for grazing, in which the livestock may trail through unsuitable areas (such as those that are forested) to access the suitable range. It would be impractical to try to manage and limit livestock from accessing those areas they need to travel through. Less than fully capable or suitable areas are those that produce less than 200 pounds of forage per acre, are an administrative site, or otherwise a management area designated not suitable for grazing.

Grazing: Utilization

212. **Concern Statement:** The Forest Service should replace utilization standards with levels of use (for example, light, moderate, and heavy) because of the high measurement variability with utilization standards and little relation to fish habitat quality or rangeland ecological conditions.

    Response: Percent forage utilization wheels are based on height-weight curves by plant species. Stubble heights are also measured on key hydric greenline species. Monitoring is conducted by following accepted national protocols. The terms "light, moderate and heavy" are used during assessments or ocular observations, not actual data collection. There is a direct correlation to the amount of forage utilization and residual stubble heights to ecological conditions, which are listed in the "Livestock Grazing and Grazing Land Vegetation" section and reference sections in the Final Environmental Impact Statement.

213. **Concern Statement:** The Forest Service should base utilization levels on site-specific data and science, which supports higher utilization (45-55 percent) because of the dominance of elk sedge, pine grass, and needle grass. A seasonal range of use (for example 40-60 percent) should be applied, and utilization levels for riparian woody plants should not be required because methods are unreliable. Forage height and weight relationships should be used rather than ocular estimates.

    Response: The utilization guides for these recommendations are based on use in pastures in good to high ecological status and on information in Appendix 11 of General

Technical Report INT-263 (May 1989 within Clary and Webster 1989). Clary and Webster (1989) also recommend for Environmentally Sensitive Areas that:

- Streambanks subject to early season grazing damage:
  Where a combination of high soil moisture and fine soil texture results in streambanks susceptible to trampling damage, grazing may need to be delayed to a late season period. The herbaceous stubble height criterion would still apply.
- Habitats where threatened, endangered, or sensitive species occur, or where streambank/channels are highly erodible: The herbaceous stubble height criterion may need to be increased to greater than 6 inches. Under extreme conditions, the area may need permanent protection, or at a minimum, grazing may need to be removed for long periods.

For subwatersheds that are functioning properly, GM-3G specifies maximum utilization rates of 30-45 percent in the active floodplain and, as needed, in other critical portions of the riparian management area. These values generally correspond with "moderate" grazing intensity (Clary and Leininger 2000, Holechek et al. 1999). Values of 30-35 percent are specified for subwatersheds that are functioning-at-risk or have impaired function. These ranges of utilization are considered "conservative" or somewhere between "moderate" to "light" grazing intensity, respectively (Clary and Leininger 2000, Holechek et al. 1999). They are comparable to guidelines from some other Regions (e.g., less than 30-40 percent on national forests in the Sierra Nevada, depending on seral state of vegetation).

These ranges of values were informed by the work of multiple researchers. Clary (1995), for example, found utilization rates greater than 30 percent in riparian meadows can reduce herbage production significantly, while Crider (1955) found root growth stops when 50 percent of aboveground biomass is removed. In addition, Holechek et al. (1999) concluded "moderate" utilization rates of 40-45 percent may maintain range conditions, while use less than 30-35 percent was needed to improve rangeland vegetation. These values were further informed by the findings of Freitas et al. (2014) and Kauffman et al. (2004). Freitas et al. (2014), for example, concluded riparian herbaceous utilization rates of 35 percent, when combined with other use limitations (such as streambank alteration or willow browse), neither degraded nor hampered recovery of meadow plant communities on the Inyo National Forest. In contrast, Kauffman et al. (2004), found at a site in the John Day River Basin, utilization rates on the order of (and likely less than) 64 percent in dry meadows and 42 percent in wet meadows may affect or hinder recovery of stream channel structure, water quality, and aquatic biota by substantially altering below ground biomass, soil porosity, infiltration rates, and other key ecological processes.

Specific monitoring indicators and levels of allowable use will be determined at the allotment pasture level during implementation of the decision.

214. **Concern Statement:** The Forest Service should eliminate the utilization guideline in Riparian Management Areas (G-115), including bank alteration guidance, and drop its bias against grazing. The Forest Service should adapt management based on riparian conditions and trend. The Forest Service should consider other impacts to riparian areas, the upward trend in riparian condition with current management, that cattle are either neutral in preference or avoid riparian areas, and means of protecting riparian habitat other than fencing. If utilization guidance is retained, the same guideline should be used for all fish species.

Response: The Final Environmental Impact Statement Alternatives E-Modified and E-Modified Departure no longer recommend different guidelines for different federally listed species, but rather bases the guidelines on the Watershed Condition Framework parameters most affected by livestock grazing, as described in the Aquatic and Riparian Conservation Strategy.

The indicators were chosen because they generally: (1) have demonstrated or plausible relationships to grazing intensity, (2) are representative of cumulative impacts throughout the season, (3) have demonstrated or plausible relationships to long-term stream conditions, (4) are regularly used by field personnel, and (5) have readily implementable field protocols that are reasonably repeatable.

The guideline explicitly specifies that these annual livestock use and disturbance indicators should be applied to help achieve, over longer timeframes, conditions at site and watershed scales that enable attainment and maintenance of aquatic and riparian desired conditions. They are not long-term management objectives, but a means to achieve them, when properly specified, applied and adapted over time (Bryant et al. 2006, Clary and Leininger 2000). Because rangelands, riparian areas, and streams are extremely diverse (Sayre et al. 2012, Swanson et al. 2015), the guideline explicitly recognizes that not all indicators are appropriate to every situation (Bryant et al. 2006, Clary and Leininger 2000). The new guideline specifies that only indicators and indicator values appropriate to a particular site should be used. In addition, indicators and associated values are to be selected, prescribed and adjusted based on site-specific conditions (such as natural site potential, similarity of existing conditions to desired conditions, ability of the area to resist livestock impacts and to recover once disturbed).

215. **Concern Statement:** The Forest Service should consider lowering utilization rates to protect ecological integrity.

    Response: The proposed riparian forage utilization rates are based on the Watershed Condition Class, which should reflect a lower allowable use along streams in less than proper functioning condition. Upland forage utilization rates are less than the 1990 Forest Plans.

216. **Concern Statement:** The Forest Service should modify guideline RNG-2 G-44 to manage for a minimum residual stubble height of six inches where compatible with the utilization standard.

    Response: The riparian grazing guidelines have been updated in the Forest Plans and Final Environmental Impact Statement to reflect values based on the watershed condition; therefore, if the watershed condition is not properly functioning, a higher stubble height would be prescribed. Stubble heights are collected along the greenline, whereas percent forage utilization is collected on the floodplain. The two measurements are not interchangeable. The Forest Service does not collect percent allowable use on the greenline, nor stubble heights in the floodplain. Each are key forage species specific and identified on the monitoring forms.

217. **Concern Statement:** The Forest Service should monitor utilization with a science-based protocol that measures leader growth intervals throughout the growing season and compares utilization levels to reference vegetation.

    Response: The utilization wheels that are used to collect percent forage use by species are based on height-weight curves for each species. Visual estimates are only used to determine if allowable use is nearing, and if actual measurements need to be collected if

required. These are annual tools and are not used to determine a condition or long-term trend in vegetation.

Grazing: Water Quality

218. **Concern Statement:** The Forest Service should deter water pollution from nonpoint sources, primarily bacterial contamination from livestock grazing, to ensure the water quality requirements of the Clean Water Act and the National Forest Management Act.

Response: The Forest Service must follow all laws, regulations, and policy direction, including the Clean Water Act, National Forest Management Act, State regulations, and Forest Service handbook and manual direction. Livestock are generally excluded from water sources used primarily for human consumption, including designated municipal watersheds and public source watersheds identified by Oregon Department Environmental Quality and Washington Department of Ecology. By law, livestock grazing is an allowed use and livestock watering is a state-designated beneficial use of water in all subbasins in the Blue Mountains.

As of 2012, the most recent year of the 305(b) report for Oregon, lists 3,244 miles of streams on the three National Forests as water quality limited. Included in this total are 1,493 stream miles on the National Forests listed for stream temperature, 293 stream miles were listed for sedimentation, 65.6 miles were listed for total coliform and 0.6 miles were listed for fecal coliform, out a total of approximately 31,000 stream miles (including the HCNRA). As of 2012, water quality limited streams are listed in three categories, as follows:

- Category 4A, water quality limited, total maximum daily loads approved (1,557 miles)
- Category 4B, water quality limited, not a pollutant, (460 miles)
- Category 5, water quality limited, 303(d) list, total maximum daily loads needed.

Total maximum daily loads are reports prepared by designated State agencies (Department of Environmental Quality in Oregon and Ecology in Washington) that identify the level of pollutants in a waterbody that can be allowed while still meeting State-designated water quality criteria, and any measures needed to reduce a specific pollutant. The role of the Forest Service is to implement the actions identified in the total maximum daily loads, if any, that are applicable to National Forest System lands. On national forests in Oregon, this is accomplished by the development and implementation of water quality restoration plans once total maximum daily loads are completed for a given subbasin. Long-term condition and trend monitoring of rangeland and riparian vegetation shows improvement in most areas, but not in all. Desired conditions may not have been reached within the last planning period from 1990 to present. The Draft and Final Environmental Impact Statements developed desired conditions and goals, as well as standards and guidelines to monitor progress toward attainment of desired conditions.

We acknowledge livestock grazing is one of many activities that may affect water quality. These effects are discussed in the Final Environmental Impact Statement in Volume 1. There is a portion of the “Land Uses Affecting Watershed Function” section devoted to livestock grazing, and watershed function is also mentioned throughout the section “Issue 3: Livestock Grazing and Grazing Land Vegetation.”

Grazing: Wildlife

219. **Concern Statement:** The Forest Service should take a hard look at the impacts of livestock grazing on conservation of listed and sensitive species and should not assume that wildlife needs can be met outside of the allotments.

    Response: The analysis of effects to surrogate wildlife species in the Final Environmental Impact Statement discusses impacts to wildlife from the varying levels of grazing proposed in each alternative.

220. **Concern Statement:** The Forest Service should not reduce animal unit months to protect wild ungulates.

    Response: The only situation where animal unit months could be reduced is where bighorn sheep may begin to occupy an active sheep allotment. The Forest Service is directed to provide viable habitat for bighorn sheep and must ensure separation between the two species.

221. **Concern Statement:** The Forest Service should manage for desired conditions for sage-grouse rather than impractical, politically determined utilization levels.

    Response: Sage-grouse direction changed between the Draft and Final Environmental Impact Statements. See Appendix A of the Final Environmental Impact Statement for sage-grouse standards and guidelines.

222. **Concern Statement:** The Forest Service should not allow fence construction within one mile of known sage-grouse leks and seasonal high-use areas nor should fence construction on the crest of low hills be authorized unless the fence is marked with anti-strike markers.

    Response: Guideline GRSG-LG-GL-038 addresses fence construction: "Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, or other design features)."

223. **Concern Statement:** The Forest Service should loosen Range Guideline 8 because historic livestock turnout may not effect sage-grouse activity.

    Response: Range Guideline 8 has been replaced with Guideline GRSG-LG-GL-037: "During the breeding and nesting season (March 1 to June 15), trailing livestock through breeding and nesting habitat should be minimized. Specific routes should be identified, existing trails should be used, and stopovers on active leks should be avoided." This guideline will minimize impacts to breeding sage grouse while still accommodating livestock grazing.

Range: Feral Horses

224. **Concern Statement:** The Forest Service should support management of feral horses due to their impact on grassland habitats and should work with State agencies to achieve desired outcomes.

    Response: The Malheur National Forest is updating the 2007 Management Plan for the Murderers Creek herd. The desired condition is described as "A viable, free-roaming wild horse herd (consistent with the desire of the herd management plan in effect at the time of project-level planning) that is genetically diverse and is in ecological balance with other approved multiple uses is present within the Murderers Creek Wild Horse

Territory. In concert, this leads toward stable or improving habitat conditions." Management actions for wild or feral horses will be described in that plan.

225. **Concern Statement:** The Forest Service should stop all management activities to control feral horse populations as their impact to rangeland values is minimal, particularly as compared to cattle.

    Response: The Malheur National Forest is updating the 2007 management plan for the Murders Creek herd. The desired condition is described as "A viable, free-roaming wild horse herd (consistent with the desire of the herd management plan in effect at the time of project level planning) that is genetically diverse and is in ecological balance with other approved multiple uses is present within the Murderers Creek Wild Horse Territory. In concert, this leads toward stable or improving habitat conditions." Management actions for wild or feral horses will be described in that plan.

Lands and Special Uses

Land and Special Uses: Land Acquisition

226. **Concern Statement:** The Forest Service should not acquire additional lands because it cannot adequately manage existing lands and it wouldn't support economic well-being.

    Response: Land transactions play a direct and indirect role in management and in resources use through increased manageability of lands made possible through acquisition and disposal. The Forest Service's existing legislative authorities provide them with the tools and safeguards to discharge their responsibility to the public for the acquisition, disposal, and prudent administration of the National Forest System lands (see Appendix B: Laws and Regulations Relevant to Forest Planning for a partial listing of the applicable statutes).

227. **Concern Statement:** The Forest Service should include plan language that encourages the acquisition of as much suitable private land as possible, with a focus on inholdings, adjacent private lands, the Nez Perce National Historic Trail, and the Oregon National Historic Trail sections.

    Response: The revised Forest Plans contain desired conditions and guidelines to support landownership adjustment by purchase, exchange, or other authority to improve management of the Blue Mountains national forests. As stated in the desired condition: "Priorities for land acquisition include non-federal inholdings within congressionally designated areas, when landowners are willing sellers and the property will enhance the values of the congressionally designated areas, and acquiring lands support known populations of threatened, endangered, proposed, or sensitive species." The desired condition also prioritizes acquisitions, conveyances, and land exchanges that resolve and improve fragmented federal and non-federal land ownership and benefit local communities. The guideline in the revised Forest Plans supports this framework and states:

    LO-2G Landownership adjustments should emphasize the following objectives: a) acquisition to meet identified resource management needs, b) acquisition contributing to consolidation that reduces administrative problems and costs and further enhances public use, and c) conveyance of land better suited for non-federal ownership.

Land and Special Uses: Land Disposition

228. **Concern Statement:** The Forest Service should not sell or dispose of any federal lands.

Response: As noted above, the Forest Service's existing legislative authorities provide them with the tools and safeguards to discharge their responsibility to the public for the acquisition, disposal, and prudent administration of the National Forest System lands. Land acquisitions, exchanges, and conveyances would be evaluated at project level planning and comply with the National Environmental Policy Act including public involvement and participation and tribal consultation.

Land and Special Uses: Land Ownership

229. **Concern Statement:** The Forest Service should manage lands near boundaries with private lands to prevent impacts to private lands and to provide access, such as through easements, temporary special use access, and utility corridors. In addition, the Forest Service should partner with State and private interests to address such issues and to address forest, fish and wildlife issues across land ownership boundaries.

Response: Multiple goals in the Forest Plans acknowledge the challenges and opportunities presented by resource considerations that span across national forest boundaries and adjoin other Federal, State, and private land ownership. This principle is established in the Forest Plans and identified in the Determination for the Need to Establish or Change Management Direction. Goal 1.1.5 – Aquatic Habitat Function recognizes the importance of high quality habitat regardless of type or ownership. Similarly, Goal 1.4.1 – Wildland Fire states, "Partnerships with other countries, agencies, States, Tribes, local governments, and landowners maximize wildfire response capabilities and meet multiple land management objectives across ownership boundaries." Goal 3.2 – Land Ownership notes there is national emphasis on open space preservation, protecting the most ecologically and socially important lands, conserving working lands as sustainable forests and grasslands, and working with communities and private land owners to preserve and maintain existing open space (USDA Forest Service 2007).

The Forest Plans similarly recognize the importance of maintaining access to National Forest System lands. Goal 2.5 – Roads and Trails Access emphasizes continued right-of-ways and easements to provide adequate and legal access to National Forest System lands; cooperative road agreements with states and counties to maintain and provide a seamless public road system to access private, state and public lands; and that the jurisdiction of county, state, and local access roads is appropriate to ensure management objectives are met for both private and state lands.

The Blue Mountain national forests have developed a strong collaborative relationship between the Forest Service, Oregon Department of Forestry, Oregon Department of Fish and Wildlife, and the Natural Resources Conservation Services, and honors our participation in the formal collaborative groups throughout Eastern Oregon and Southeastern Washington. These collaborative relationships offer opportunity to apply compatible vegetation and fuels treatments, wildlife management, and watershed restoration across forest boundaries. Projects conducted under the National Cohesive Wildfire Strategy offer an example of project-level planning that includes Bureau of Land Management, State, and private lands, to seek national, all-lands solutions to wildland fire management issues, and similar project-level actions would continue under the revised Forest Plans.

Management Areas

MA 2B: Research Natural Areas

230. **Concern Statement:** The Forest Service should not designate research natural areas. These areas need to be managed rather than serving as de facto wilderness areas. The research natural areas standards that limit mining exploration, development and removal of common mineral materials should be dropped.

    Response: As stated in the Forest Service's planning regulations at 36 CFR 219.25 – Research natural areas (1982), "Forest planning shall provide for the establishment of research natural areas. Planning shall make provision for the identification of examples of important forest, shrubland, grassland, alpine, aquatic, and geologic types that have special or unique characteristics of scientific interest and importance and that are needed to complete the national network of research natural areas." Research natural areas are available for research, study, observation, monitoring, and educational activities, uses that typically are non-destructive and non-manipulative. Management Area 2B – Research Natural Areas, generally comprise less than 1 percent of the planning area and do not detract significantly from management activities associated with General Forest allocations: specifically, Management Area 2B comprises 0.6 percent of the Malheur National Forest, 0.8 percent of the Umatilla National Forest, and 0.5 percent of the Wallowa-Whitman National Forest. Activities proposed within or adjacent to Management Area 2B lands would be evaluated through project level planning and comply with the National Environmental Policy Act including public involvement and participation.

MA 2C: Botanical Areas

231. **Concern Statement:** The Forest Service should not designate botanical areas because they limit other uses, including silvicultural treatments, removal of common mineral materials, firewood collecting, and utility corridors. Moreover, the Forest Service has no authority to create such management areas.

    Response: The revised Forest Plans comply with and are constructed through existing regulatory frameworks including law, regulation, and policy. The Forest Service Manual defines botanical areas as "a unit of land that contains plant specimens, plant groups, or plant communities that are significant because of their form, color, occurrence, habitat, location, life history, arrangement, ecology, rarity, or other features" (Forest Service Manual 2372.05). Designation of such areas, as outlined in the set of manual direction, states: "If a decision in the forest plan recommends designation, include management direction in the plan or in an amendment to the plan later. Except for those areas approved by the Secretary, approval by the Regional Forester of the forest plan constitutes designation of the area" (Forest Service Manual 2372.2).

    Management Area 2C – Botanical Areas total 2,000 acres with the planning area, representing 0.04 percent of the planning area. This relatively small amount of land allocation does not detract from other management activity conducted within other general forest areas. Activities proposed within or adjacent to Management Area 2C lands would be evaluated through project-level planning and comply with the National Environmental Policy Act including public involvement and participation.

MA 2E: Historical Areas

232. **Concern Statement:** The Forest Service should list historical resources from the National Historic Register in its table of historical areas, and these areas should be designated Management Area 2E: Historical Areas.

    Response: The areas that are specifically managed to protect cultural resources are allocated to Management Area 2E – Historical Areas, and may or may not contain those resources listed on the National Register of Historic Places. Cultural resources in other locations outside of Management Area 2E are protected through existing laws, regulations, policies, and existing agreements with the Oregon and Washington State Historic Preservation Offices. Evaluating cultural resources for their National Register of Historic Places eligibility is not conducted as part of forest plan revision and is usually conducted as part of project-level planning and site-specific analysis that comply with the National Environmental Policy Act and the National Historic Preservation Act, and includes public involvement and participation and Tribal consultation.

233. **Concern Statement:** The Forest Service should turn over all historic areas and resources to an organization like the Oregon State Historic Preservation Office for management because managing historic resources is not within the Forest Service mission and they don't have the required expertise. The Forest Service should provide explanation as to why designated lands qualify to be Historical Areas.

    Response: There currently is no legal authority to transfer lands, specifically historic areas and resources, to the Oregon or Washington State Historic Preservation Office for management. The U.S. Congress provides the Forest Service a charter to preserve and steward historic properties through the National Historic Preservation Act of 1966. The Forest Service strives to meet this mandate through heritage program management to ensure historic properties are preserved, and these properties may inspire and benefit present and future generations.

    Individual State Historic Preservation Offices were established after passage of the National Historic Preservation Act in 1966. Their role is to advise and assist Federal agencies in reviewing potential effects from federally assisted projects. As stated in 36 CFR 800.2: "The State Historic Preservation Officer reflects the interests of the State and its citizens in the preservation of their cultural heritage. In accordance with section 101(b)(3) of the act, the State Historic Preservation Office advises and assists Federal agencies in carrying out their section 106 responsibilities and cooperates with such agencies, local governments and organizations and individuals to ensure that historic properties are taken into consideration at all levels of planning and development."

    The description and background section for Management Area 2E, Historical Areas, included in the Forest Plans provides a discussion of the types of resources that are allocated to this management area.

234. **Concern Statement:** The Forest Service should use forest planning as a way to identify areas for cultural resource management so tribes aren't required to consult on every single NEPA project. This is particularly relevant on the Wallowa-Whitman National Forest where no historical areas have been identified.

    Response: The areas that are specifically managed to protect cultural resources are allocated to Management Area 2E – Historical Areas. Cultural resources in other locations are protected through existing laws, regulations, policies, and existing agreements with the Oregon and Washington State Historic Preservation Offices.

Identifying archaeological sites, traditional cultural properties, and properties of religious and cultural significance to tribes includes consultation with the affected tribes, and while these efforts are completed at site-specific and project-level analysis, site and resource identification processes may be developed outside of the forest planning process to better facilitate pre-planning in advance of project development.

MA 2F: Scenic Byways and All-American Roads and MA 2G: Nationally Designated Trails

235. **Concern Statement:** The Forest Service should transfer Scenic Byways and All-American Roads to the State of Oregon or the appropriate county as they can be maintained with lower costs that way. The Forest Service should consider adding the Nez Perce National Historic Trail and the Oregon National Historic Trail auto tour routes to this designation.

    Response: There currently is no legal authority to transfer lands, specifically Scenic Byways and All-American Roads, to the State of Oregon for management. Scenic Byways and All-American Roads are established by Oregon Administrative Rules and Title 23, Section 162 of the United States Code, respectively. These programs represent grass-root collaborative efforts to help recognize, preserve and enhance selected roads throughout the United States, and as stated in the Oregon Administrative Rules (734-023-0010), the goals and objectives of the program "create a comprehensive statewide multi-agency program to identify Oregon's most outstanding scenic transportation corridor." The Blue Mountains national forests participate in this "multi-agency" partnership through Scenic Byway Committee membership, and strive to preserve, protect, enhance, interpret, and promote the intrinsic qualities of designated byways.

    Auto tour routes associated with the Nez Perce National Historic Trail and the Oregon Trail National Historic Trail are discussed in Management Area 2G – Nationally Designated Trails as these routes are considered components of these nationally recognized trails.

236. **Concern Statement:** The Forest Service should develop standards and guidelines for the Scenic Byways and All-American Roads Management Area (2F) and Nationally Designated Trails Management Area (2G).

    Response: Based on internal reviews of the Forest Plan and Environmental Impact Statement, and on public concerns and comments, the following guidelines were developed for Management Area 2F – Scenic Byways and All-American Roads and Management Area 2G – Nationally Designated Trails. These guidelines, combined with the stated desired conditions for each management area, help inform future project-level development and site-specific analysis

    MA2F-1G The desired landscape character of the area should be retained or enhanced.

    MA2F-2G Visual impacts from vegetation treatments, recreation uses, rangeland developments, and other structures should blend with the overall landscape character along scenic byways.

    MA2F-3G Signs, kiosks, and other exhibits should provide interpretive, education, and safety information along scenic byways and in adjacent recreation sites.

MA2G-1S The Nez Perce National Historic Trail shall be managed consistently with the guidance in the Nez Perce National Historic Trail Comprehensive Management Plan (USDA Forest Service et al. 1990).

MA2G-2S The Nez Perce National Historic Trail shall be managed as a nonmotorized route for primitive hiking and horseback riding for trail segments that are not identified as auto tour routes.

Activities proposed within or adjacent to Management Areas 2F and 2G would be evaluated through project level planning and comply with the National Environmental Policy Act including public involvement and participation.

Mining

Mining: Authorities and Law

237. **Concern Statement:** The Forest Service should comply with the National Mining and Minerals Policy Act of 1970 and General Mining Act of 1872 to facilitate the development of mineral resources and provide for open access and occupation of lands for prospecting and developing minerals.

    Response: The policy of the Forest Service is to honor and protect the right of the public to prospect, mine, and develop valuable minerals under the mining laws of the United States. The Organic Act of 1897 allows for these rights to be exercised within the national forests subject to the rules regulating the national forests.

238. **Concern Statement:** The Forest Service should clarify why it believes 30 U.S.C. section 21(a) applies to the Department of Agriculture. Others suggested the Forest Service should amend the plans to consider economics and comply with 30 U.S.C. sections 21(a), 1801 and 1803; 43 U.S.C.; 16 U.S.C. sections 428, 475, 482, 528, and 551; and Executive Order 12630.

    Response: The Organic Administration Act of 1897 (16 U.S.C. 473-475, 477-482, 551) authorizes the Secretary of Agriculture to issue rules and regulations for the use and occupancy of the National Forests and to protect them from unnecessary environmental impacts. The Multiple Use Mining Act of 1955 (30 U.S.C. 611-615) authorizes the Forest Service to restrict mining operations on National Forest System lands to only those uses reasonably incident to mining and in a manner that minimizes adverse environmental impacts. Regulations through which the rules and procedures for use of National Forest System lands in connection with United States mining laws are found in 36 CFR 228, Subpart A. Further, the Forest Service is required by law to prevent or eliminate unauthorized use of the national forests.

239. **Concern Statement:** The Forest Service should describe minerals using the three lawful categories of mineral classes.

    Response: The categories locatable, leasable, and saleable were used in the Proposed Forest Plan and Draft Environmental Impact Statement, are used in the Final Environmental Impact Statement and Final Forest Plans.

240. **Concern Statement:** The Forest Service should clarify that when a mineral withdrawal occurs, mining operations on claims that predate the withdrawal may continue. In addition, all lands not lawfully withdrawn from mineral exploration or development must remain open to such use. If recommending a withdrawal, the value of the minerals,

and the loss to the local, state and national interests by precluding mining activity should be calculated.

Response: This was stated in the Draft Environmental Impact Statement and clarified in the Final Environmental Impact Statement. In general, mining may continue in areas withdrawn from mineral entry if a valid mineral claim exists prior to the date of the withdrawal. Mining activity in withdrawn lands is still subject to an approved plan of operation and may require a special use permit depending on the type of operation and where it is located.

The Draft Environmental Impact Statement stated that lands withdrawn from mineral entry cannot be utilized for mining "subject to valid existing rights." This means that locatable mineral development can occur in wilderness areas, wild river corridors, areas of unique and special characteristics, and other lands withdrawn from mineral entry, provided valid existing rights have been determined. The Draft and Final Environmental Impact Statements also state, ". . . all other National Forest System lands would be classified as generally suitable for locatable mineral development."

Mining: General

241. **Concern Statement:** The Forest Service should protect the mining heritage of Baker, Grant, and Malheur Counties. Likewise, the Forest Service should recognize the importance of mining and mining reclamation to social well-being (Goal 2).

    Response: Mining laws of the United States specify the right to prospect, develop, and mine valuable minerals. The Organic Act of 1897 allows these continued rights as long as the rules regulating use of the national forests (36 CFR 228) are followed. Forest Service policy is to protect authorized uses granted by these statutory rights but the agency is also required by law to prevent and eliminate unauthorized use.

    The Blue Mountains Revised Forest Plans discusses the social and economic importance of mineral and energy resources on the National Forests under Goal 3 (economic well-being). The Forest Plans identify as a desired condition, "Exploration, development, and production of mineral and energy resources contribute to the social and economic needs as well as local communities, and are conducted to minimize adverse environmental effects on national forest surface resources. Reasonable access is provided to valid existing mineral claims, as well as for exploration and production of leasable and locatable mineral resources. Congressionally designated wilderness, wild rivers, municipal watersheds, or other areas of important natural or cultural resource value are withdrawn from mineral entry, subject to valid existing rights." (Revised Forest Plans, Goal 3).

242. **Concern Statement:** The Forest Service should incorporate goals to encourage mining and preserve access for mining exploration and production.

    Response: It is Forest Service policy to honor and protect the right of the public to prospect for, develop, and mine valuable minerals. All plan revision alternatives include a desired condition that mineral and geological resources contribute to the social and economic needs of the local communities as well as the Nation.

243. **Concern Statement:** The Forest Service should support mining by defining "significant surface disturbance" as over 5 acres and "mechanized earthmoving mining equipment" as being able to move greater than 20 yards of material per operational hour. The Forest Service should automatically approve all Notice of Operations if not approved within 15

days and should approve all Plans of Operation within 30 days, unless an EIS is required. Others suggested an objective of approving Notice of Operations or Plans of Operation within 90 days or 1 year.

Response: "Significant disturbance can only be determined through fair, reasonable, and consistent evaluation" of proposed plans of operation and is made on a case-by-case basis as described in the Forest Service Manual (FSM 2817.11) and 36 CFR 228.4. The time needed for review and approval of proposed plans of operation varies with the nature of the proposed plan and the resources that may be affected. Current Forest Service regulations allow 30 days, with possible extension not to exceed 60 additional days (36 CFR 228, Part A).

244. **Concern Statement:** The Forest Service should include mining in the suitability matrix and should add locatable minerals to the goods and services discussion. It should also include an overview of the management challenges related to mining.

Response: The suitability matrix describes the suitability of various management activities within each management area under the proposed Forest Plans. The mining laws of the United States create exceptions in several instances, because Federal lands are available for mining unless they are specifically withdrawn from mineral entry. All lands not specifically withdrawn from mineral entry are available for exploration, prospecting, and development by the mining laws of the United States. For example, designated wilderness areas are withdrawn from mineral entry when they are designated, but the exercise of mineral rights that exist at the time of designation are allowed. Similarly, rivers designated as wild under the Wild and Scenic Rivers Act are withdrawn from mineral entry, subject to the same exercise of valid existing rights, but rivers designated as scenic are recreational under the Act and are not withdrawn, but activities that may affect the scenic or recreational values for which a given river is designated may be limited under the Act. Other areas that may be suitable for mining may be withdrawn from mineral entry if mining is not compatible with the protection of resource values identified for a specific area and this may occur regardless of the management area designation.

Mining is included in the discussion of goods and services (Section 3.3 in the Forest Plan). However, income generated from mining operations in the Blue Mountains cannot be verified unless it is done by a company that reports its earnings. It is primarily for this reason that the discussion of locatable minerals is limited in the goods and services section.

The discussion in the Final Environmental Impact Statement related to mining is limited to the lands available for mining of locatable minerals and the laws and regulations that apply. Mining is allowed on the National Forests in accordance with the mining laws of the United States, but the laws establishing the National Forests give the agency the authority and obligation to manage and protect surface resources. Subsequent Federal and State laws provide for the protection of threatened and endangered species and protection of water quality.

Mining: Impacts

245. **Concern Statement:** The Forest Service should acknowledge that heavy metals and acid discharges do not occur at levels that adversely affect fish or human health. Natural background levels of mercury should be noted.

Response: The Forest Service does not have the information to make such a claim. Whether heavy metals exist in high enough concentration to be harmful to aquatic life or human health depends on the concentration of metals, the determination of which would require a specific analysis and comparison to State water quality criteria. Low pH, by itself may be an indicator that metals are present but not necessarily which metals, although this can often be inferred from the type of mineral deposit, if known. Low pH alone may be harmful to aquatic life depending on the duration of exposure and the species that are affected. The Final Environmental Impact Statement acknowledges that there are natural sources of metallic mercury in the Blue Mountains, but mercury is also recognized as a substance with no known physiological function and one that can be harmful at very low concentrations with prolonged exposure.

246. **Concern Statement:** The Forest Service should include standard MM-1 to avoid adverse impacts to listed species and designated critical habitat from mining operations.

    Response: Standard MM-1 is included in the preferred alternative as Standard MM-5. Three additional guidelines and one additional standard related to minerals management are contained in the preferred alternative intended for the protection of water quality and habitat for aquatic and riparian-dependent species, location of mine waste, location of support facilities, structures, and roads, and the implementation of best management practices.

Mining: Motorized Access

247. **Concern Statement:** The Forest Service should create exceptions for mining in areas unsuitable for motor vehicle use. Likewise, an exception for new road construction for mining operations should be noted and cross-country travel for prospecting should be allowed.

    Response: Such an exception might be granted in response to a specific request, and evaluation of the basis and demonstrated need on which the request is based. Such an analysis is necessarily site-specific and is outside the scope of decisions made in a forest plan. Nothing currently prevents such a request from being made and evaluated on its merits. By regulation, the request for a road may be granted as part of an approved plan of operations, and is subject to analysis of the need and the proof of a valid mineral claim.

Mining: Wildlife

248. **Concern Statement:** The Forest Service should recognize that mining may benefit fish habitat and other uses.

    Response: In general, the adverse effects of suspended sediment and turbidity on salmonid fishes are well known. Clean gravel for spawning habitat is a known requirement of all salmonids, but it is not clear that this is outweighed by the effects of fine sediment, the downstream transport and eventual deposition of fine sediment, or the disruption of bed sediments that is typically associated with placer mining.

Planning

Planning: 1982 Rule

249. **Concern Statement:** The Forest Plan revision should remove its inclusion of "ecological integrity" because the concept is from the 2012 Planning Rule and is not legally defensible under the 1982 rule. If the plan is going to blend the use of the two planning rules, it should declare which rule is being used when in the document.

    Response: The Blue Mountains National Forest Plans have been revised under the legal framework of the National Forests Management Act and the provisions of the 1982 Planning Rule, as allowed by the 2012 Planning Rule language at 36 CFR 129.17 (b)(3). The Forest Service followed requirements for revising land management plans (forest plans), as required by the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by the National Forest Management Act of 1976. The Act reinforces the multiple use purposes of the National Forest System as specified in the Forest and Rangeland Renewable Resources Planning Act and the Multiple Use Sustained Yield Act. The National Forest Management Act specifies that forest plans provide for "multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use Sustained-Yield Act of 1960, and in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness."

    "Multiple use" is defined in the implementing regulations for the 1982 planning rule as "The management of all the various renewable surface resources of the [National Forest System] so that they are used in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output, consistent with the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528- 531)."

    "Sustained-yield of products and services" is defined in the implementing regulations for the 1982 planning rule as "the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest System without impairment of the productivity of the land."

    Ecological integrity is defined as "The quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence" (36 CFR 219.19). The Forest Service uses the concept of ecological integrity as a means to achieve the goals set forth in both the National Forest Management Act and Multiple-Use Sustained-Yield Act to manage the forest resources in a "harmonious and coordinated" manner, "without impairment of the productivity of the land."

250. **Concern Statement:** The Forest Service should incorporate analysis of economic benefits and costs, opportunity costs, and cost-efficient alternatives as required by the

1982 Planning Rule (36 CFR 219.12(f)). The plan also fails to show, per the 1982 rule, the impact on present net value.

Response: The planning record contains a cost-benefit analysis that estimates the present net value of Forest Service expenditures and receipts over the life of the forest plans. A more detailed cost-benefit analysis that addresses, for instance, costs per unit of treatment or the cost of closing roads, cannot be estimated with available information. As a plan revision, this document does not contain site-specific management actions. Treatment costs or road costs cannot be known without site-specific information. More detailed cost-benefit analysis will be included in subsequent project-level environmental analysis documents where economic efficiency is identified as an issue.

251. **Concern Statement:** The Forest Service should adjust its limited timber harvest suitability that violates the 1982 Planning Rule, requiring "[e]ach sale schedule shall provide for a forest structure that will enable perpetual timber harvest which meets the principle of sustained-yield and multiple-use objectives of the alternative" 36 CFR §219.16(a)(2)(iv).

    Response: The base timber harvest schedule in the alternatives are designed to maintain the long-term sustained yield capacity and to demonstrate a non-declining flow of sustainable forest products for the next five decades, consistent with the forest planning regulations. The one exception to this was Alternative E-Modified Departure. Because of the high degree of disparity between the desired conditions for susceptibility to insects and disease, forest vegetation, and fire regimes, compared to existing conditions of the forests, the Forest Service modified Alternative E as a "departure" alternative. Alternative E-Modified Departure's harvest schedule was developed outside of the constraints of non-declining flow or the long-term sustained yield capacity. (See "Ecological Resilience," "Forested Vegetation," and "Insects and Diseases" sections of Chapter 3 in the Final Environmental Impact Statement). All of the alternatives except E-Modified Departure comply with requirements for non-declining flow.

Planning: Alternatives-Range

252. **Concern Statement:** The Forest Service must evaluate a reasonable range of alternatives, per Council on Environmental Quality and National Environmental Policy Act regulations. The agency did not do this as evidenced by its use of the same standards and guidelines in all action alternatives.

    Response: The Council on Environmental Quality regulations (40 CFR 1502.14 (a)) require that agencies "Rigorously explore and objectively evaluate all reasonable alternatives," not a "reasonable range" of alternatives. However, with eight alternatives considered in detail, we believe the Final Environmental Impact Statement presents a range of reasonable alternatives. Each alternative was designed to meet the purpose and need and address one or more of the issues. Many standards and guidelines do not vary among alternatives because they were designed to meet statutory obligations under the National Forest Management Act, Endangered Species Act, Clean Water Act, and other laws and regulations. Management area acreages and suitability for specific activities vary among the alternatives. Each alternative is described in Chapter 2 along with an explanation of how the alternative responds to the issues. For example, Alternative C was designed to take a largely passive approach to restoration, whereas Alternative D was designed to maximize outputs of goods and resources while minimally meeting requirements to conserve forest resources. With the exception of Alternative E-Modified

Departure, the key indicators for the other plan revision alternatives are intermediate between Alternative C and D. Tables 1, 2, and 3 in Chapter 2 of the Final Environmental Impact Statement summarize how the alternatives respond to the issues, as measured by the key indicators for each National Forest. Appendix A displays the full components of all alternatives.

253. **Concern Statement:** The Forest Service should include alternatives that reflect a more aggressive pace and scale of vegetation management.

Response: The Forest Service received many comments about increasing the pace and scale of restoration on the National Forests to help prevent catastrophic fires, improve habitat for big game animals, and provide a flow of forest products to local mills to stimulate local economies. The Forest Service developed and analyzed two additional alternatives in the Final Environmental Impact Statement designed to support an increased pace and scale of restoration. Alternative-E Modified would maintain an overall level of harvesting similar to Alternative E, but would focus these harvest acres more intently on the portions of the dry upland forest with the greatest need for immediate treatment. This alternative would allow for considerable increases in the thinning of the dense-dry upland forest within 20 years while still being consistent with the sustainability principles of the non-declining flow rules.

The Forest Service also developed Alternative E-Modified Departure, which is not bound to the non-declining flow or the long-term sustained yield capacity. Alternative E-Modified Departure was developed because of the high degree of disparity between the desired conditions for susceptibility to insect and diseases, forest vegetation, and fire regimes, compared to the existing conditions of the forests.

Planning regulations allow Alternative-E Modified Departure to temporarily waive the non-declining flow rules. Alternative-E Modified Departure was designed to thin essentially all of the acres of dense-dry upland forest located within the lands suitable for timber production within 20 years. When combined with additional restoration thinning that would occur on other lands that are suitable for harvesting, the Alternative-E Modified Departure would allow for thinning roughly 70 percent of the dense-dry upland forest acres that are available for harvest within the next 20 years.

254. **Concern Statement:** The Forest Service should develop and choose a pro-motorized recreation alternative, to conform to Public Law 91-190 that maintains existing levels of use.

Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. These designations are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212). Access is analyzed in the Final Environmental Impact Statement and includes a range of alternatives that vary the amount of area (acres) that are rated suitable for either motorized or nonmotorized use, and rated for both summer and winter use. Subsequent analyses of projects under the Forest Plan will have site-specific data to show differences among project alternatives and their effects on motorized travel.

The revised Forest Plans do not make site-specific route decisions and do not intend to limit or reduce access. Where appropriate, motorized recreation opportunities may be maintained or expanded.

255. **Concern Statement:** The Forest Service should consider the alternative not constrained by budget—as represented by Alternative K—that was eliminated from consideration.

Each alternative should be analyzed with and without budget constraints. The 1982 Planning Rule does not require constraining alternatives based on potential budgets.

Response: The National Forest Management Act and its implementing regulations require the Forest Service to consider reasonable alternatives. The Forest Service eliminated Alternative K from detailed analysis because the assumption of an unconstrained budget under Alternative K is not reasonable. Both the Draft and Final Environmental Impact Statements include an explanation of why alternative K was eliminated from consideration (see Chapter 2, "Description of Alternatives Considered but Eliminated from Detailed Study"). Alternatives D, E, E-Modified, E-Modified Departure and F include reasonable budget assumptions although these exceed current budgets. Even so, national forest land management plans cannot commit the Federal Government to make additional budget allocations.

256. **Concern Statement:** The Forest Service should fully consider Alternative A and include it in all comparisons and tables.

Response: Chapter 2 and Appendix A of the Final Environmental Impact Statement describe the plan components for Alternative A. Tables 1, 2, and 3 in Chapter 2 detail how the alternatives, including Alternative A, vary by alternative according to the key indicator measures. The effects of Alternative A are described in Chapter 3 – Environmental Consequences.

Planning: Best Available Science

257. **Concern Statement:** The Forest Service should use current, peer-reviewed science and not rely on dated studies to assess on-the-ground conditions. The use of non-relevant scientific information merits a need for a change in the assessment (FSH 1909.12 Chap 20). When computer model outputs provide a 10- to 20-year estimate for a resource, the plan should explain how these estimates or assumptions were made.

Response: The Draft and Final Environmental Impact Statements and revised Forest Plans explain how scientific information has been compiled and used. The Environmental Consequences section in Chapter 3 of the Final Environmental Impact Statement identifies the methods used and references the scientific sources relied upon. This documentation identifies what information the Forest Service determined to be the best available scientific information, explains the basis for the determination, and explains how the information was applied to the issues considered.

258. **Concern Statement:** The Forest Service should not use the dated 1997 Interior Basin Ecosystem Management Project (ICBEMP) research as "best available science" for the forest revision plan, in part, because the ICBEMP never had a final decision.

Response: Although there was no final decision for Interior Columbia Basin Ecosystem Management Project, the project compiled valuable scientific information. Scientific studies conducted by the Interior Columbia Basin Ecosystem Management Project (Quigley et al. 1996, Quigley and Arbelbide 1997) were incorporated in the development of the revised Forest Plans and alternatives as directed in an interagency memorandum signed April 18, 2014 by the Deputy Regional Foresters in Forest Service Regions 1, 4, and 6; State Directors for the Bureau of Land Management in Oregon/Washington and Idaho; the Environmental Protection Agency Region 10; the Fish and Wildlife Service, Pacific Region; and NOAA Fisheries, West Coast Region. This memorandum is titled "The Interior Columbia Basin Strategy: A strategy for

applying the knowledge gained by the Interior Columbia Basin Ecosystem Management Project to the revision of land use plans and project implementation." The Strategy provides principles that incorporate the science data and resource information developed by the Interior Columbia Basin Management Project, as well as more recent science, into land use plans (Forest Service land management plans and Bureau of Land Management resource management plans) and project implementation. The Strategy identifies key principles that are relevant to future planning efforts including an update of ecological principles. The Blue Mountains forest plans revision activities and products have been designed to be responsive to the guidance and expectations identified in the Strategy. For more information on the Strategy, including expectations for incorporating guidance from the Strategy in Forest Plan revisions, go to: https://icbemp.gov/html/ICBEMP_Frameworkmemorandum-and-strategy_2014.pdf

259. **Concern Statement:** The Forest Service should incorporate a variety of citations, provided from public comment letters, into the forest revision plan.

    Response: The Draft and Final Environmental Impact Statements and revised Plans explain how scientific information has been compiled and used. The environmental consequences in Chapter 3 of the Final Environmental Impact Statement identifies the methods used and references the scientific sources relied on. Where comment letters have included substantive comments and full and relevant scientific citations, the Forest Service has incorporated those citations that reflect the best-available science.

260. **Concern Statement:** The Forest Service should not require use of "best available science" for the forest revision plan because the National Forest Management Act and the National Environmental Protection Act do not require it, and case law allows the Forest Service to make natural resource decisions based on its discretion in weighing multiple-use objectives.

    Response: The Forest Service has an obligation under the National Environmental Policy Act to insure the scientific integrity of the discussions and analyses in environmental impact statements. This includes identifying the methodologies used and citing the scientific and other sources of information relied upon for conclusions in the Environmental Impact Statement (40 CFR 1502.24). The Draft and Final Environmental Impact Statements and Revised Forest Plans explain how scientific information has been compiled and used. Chapter 3, Environmental Consequences, in the Final Environmental Impact Statement identifies the methods used and references the scientific sources relied on to disclose the effects of the alternatives.

Planning: Budget

261. **Concern Statement:** The Forest Service should not approve the forest revision plan if funding is not available. The Forest Service should not blame the budget as to why it cannot accomplish the plan's three goals—ecological, social, and economic.

    Response: According to the National Forest Management Act and its implementing regulations, Forest Plans do not commit the Federal Government to make new budget allocations, nor may forest plans compel specific activities to occur, including monitoring, if funding is unavailable. A forest plan may be used to help develop budget proposals, which subsequently must be approved by Congress and signed into law by the President. National Forests in the Blue Mountains will continue to prioritize projects and activities, given available funding, to achieve progress toward desired conditions.

262. **Concern Statement:** The Forest Plan should allow for achieving the desired condition at a faster pace and scale if budgets increase.

    Response: Each alternative includes a predicted total sale program quantity for each National Forest. The total sale program quantity under Alternatives E-Modified and E-Modified Departure is significantly higher than current or recent harvest levels and would move toward desired conditions at a faster pace and larger scale than Alternative E. The Forest Service developed Alternative E-Modified Departure specifically to respond to this and similar comments. Each alternative has sufficient flexibility to accommodate increases in budgets for managing forests at a faster pace and scale.

Planning: Goals and Desired Conditions

263. **Concern Statement:** The Forest Service should establish desired future conditions linked to objectives or enforceable standards so that they will be more than aspirational guidance.

    Response: Plan components (goals, standards, guidelines, objectives) in each resource area work together to move the National Forests toward desired conditions. Based on public input and revised recommendations by resource specialists, we strengthened many plan components to be more specific and measurable. For example, to protect aquatic and riparian ecosystems, we strengthened relevant plan components based on best-available science and compiled them under a Blue Mountains Aquatic and Riparian Conservation Strategy (2018 ARCS).

264. **Concern Statement:** The Forest Service should not develop desired conditions that seek to achieve unattainable conditions, for example, in the 1.1.3 Wetland Function that seeks undisturbed surface and subsurface flow paths.

    Response: The Forest Service reviewed the desired conditions to ensure long-term feasibility. For the example cited in the above comment, the word “undisturbed” has been replaced with “functional” in Goal 1.1.3: Wetland Function, because disturbance can play a natural role in wetlands.

265. **Concern Statement:** The Forest Service should do more active management if it intends to achieve desired conditions. Failure occurs due to the emphasis on backcountry and wilderness management areas and unnecessary budget constraints.

    Response: In response to public input, the Forest Service developed a range of alternatives representing different levels of active management. Two additional alternatives, E-Modified and E-Modified-Departure, include an increase in active timber and vegetation management objectives.

266. **Concern Statement:** The Forest Service should provide timelines for the forest revision plan’s goals and desired conditions to hold Forest Service management accountable.

    Response: Objectives, rather than goals and desired conditions, are measurable time-specific statements expressing the desired rate of progress toward attainment of desired conditions. The Final Environmental Impact Statement, Appendix A and the revised Forest Plans explain that the objectives (as displayed in the tables) cover the first 10 years of the plans, except where noted.

267. **Concern Statement**: The Forest Service should improve its vague definition for “ecological integrity,” as part of the Goal 1 introduction, and note that the definition

differs from what is in the forest revision plan's glossary. It should also improve its use of the terms "ecological function," "ecological structure," and "ecological processes."

Response: The Forest Service agrees that terms in the Environmental Impact Statement should be consistent with glossary definitions. The Forest Service has edited the definitions for the scientific terms expressed under Goal 1 to improve consistency and clarity.

Ecological integrity is defined as "The quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence." (36 CFR 219.19) The Forest Service uses the concept of ecological integrity as a means to achieve the goals set forth in both the National Forest Management Act and the Multiple Use Sustained-Yield Act to manage the forest resources in a "harmonious and coordinated" manner, "without impairment of the productivity of the land."

268. **Concern Statement**: The Forest Service should not refer to Goal 1.12 Landscape Patterns, 1.13 Special Habitats, and 1.14 Snags and Down Wood as indicators of sustainability.

    Response: The Forest Service has adjusted text related to Goal 1 (Promote Ecological Integrity) for landscape patterns, special habitats, and snags and down wood to say they are key components of healthy ecosystems in the Blue Mountains National Forests. Although the primary focus of these sections in Goal 1 is ecological integrity, the goal and the desired conditions are interrelated with the social and economic components of sustainability. Resources that contribute to ecological integrity are interrelated with Tribal interests and treaty-reserved resources.

Planning: Laws, Regulations, Policy

269. **Concern Statement:** The Forest Service should minimize conflicts between revised Forest Plans and travel management decisions. The Forest Service should draft the travel management plan in conjunction with forest plan revision, and it should include plan elements that clarify how future travel management plans will tier to the forest plans.

    Response: The Forest Service is required to manage roads, trails, and areas consistent with the laws, regulations, and policies governing the National Forest transportation system, including the Travel Management Rule. Alternatives E-Modified and E-Modified Departure affirm this ongoing requirement based on current regional and national direction. Based on public input and recommendations by resource specialists, these alternatives include additional detail to address forestwide issues related to motorized uses, such as elk security intended to encourage elk use of public lands, and key watershed function.

    The two planning processes—forest plan revision and travel management planning—are distinct and separate. In March 2015, direction was given by Jim Peña, Pacific Northwest Regional Forester, that directs the Blue Mountains National Forests to defer any additional work required under Subpart B of the Travel Management Rule until after the Blue Mountains Plan Revision is completed. In line with the Regional direction, the Wallowa-Whitman and Malheur National Forests have paused Subpart B analysis until the Forest Plan Revision is complete. The Forests completed Subpart A of Travel

Management Planning in the latter part of 2015. All three National Forests will continue to address natural resource concerns and public access needs as part of ongoing project-level decisions and forest restoration efforts, and base these analyses on existing regulation and the guidance contained in Forest Plans

The revised Forest Plans will provide programmatic direction for the National Forests for future planning and site-specific analysis. Travel Management Planning, as required under 36 CFR 212, provides for identification of a road system: "The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR 219)" (36 CFR 212.5). The Forest Service anticipates that future travel management planning would conform to these regulations, incorporating a science-based roads analysis at the appropriate scale, including broader "landscape-wide level" analysis.

270. **Concern Statement:** The Forest Service should remove all references to road closures, new road construction, and a sustainable road system as all are beyond the scope of forest plan revision. Access issues and their environmental impacts should be addressed through travel management planning.

Response: The National Forests will continue to operate under the revised Forest Plans consistent with applicable laws, regulations, and policies. The revised Forest Plans will provide strategic direction and guidance to manage a variety of resources on the National Forests, including motorized routes and areas. The Forest Plans, on their own, will not open or close motorized routes and areas. Site-specific decisions on motorized routes and areas require additional analysis at the project level. Under the planning regulations (1982) the revised Forest Plans examine and analyze, programmatically, roads and the forest transportation system as it relates to management requirements, recreation resources, fish and wildlife resources, and mineral resources. No site-specific recommendations result from this analysis, and future travel management planning will provide detailed, site-specific analysis that is expected to conform to direction in the Forest Plans.

271. **Concern Statement:** The Forest Service should abide by Executive Order 11644 that requires the agency to minimize effects from motorized routes and from over-snow-vehicles. Others suggested over-snow-vehicle use should be addressed in travel management planning.

Response: The National Forests will continue to operate under the revised Forest Plans consistent with applicable laws, regulations, and policies. The revised Forest Plans will provide strategic direction and guidance to manage a variety of resources on the National Forests, including motorized routes and areas. The Forest Plans on their own will not open or close motorized routes and areas. Site-specific decisions on motorized routes and areas require subsequent site-specific analysis. Designating routes and areas for over-snow vehicles must comply with the agency's travel management regulations (36 CFR 212), specifically Subpart C—Over-Snow Vehicle Use. The travel management process includes adhering to the National Environmental Policy Act guidance and includes opportunity for public involvement and participation.

272. **Concern Statement:** The Forest Service should recognize the National Route Designation rule so that motorized recreationists retain existing motorized routes rather than seeing additional closures of routes. Likewise, the Forest Service should not limit road access because a variety of laws and regulations require that the public be able to

access public lands. The Forest Service should not compromise the human environment, per the National Environmental Policy Act, through the forest plan revision.

Response: The National Forests will continue to operate under the revised Forest Plans consistent with applicable laws, regulations, and policies. The revised Forest Plans will provide strategic direction and guidance to manage a variety of resources on the National Forests, including motorized routes and areas. However, the Forest Plans on their own will not open or close motorized routes and areas. Site-specific decisions on motorized routes and areas require subsequent site-specific analysis.

Subsequent to the adoption of the revised Forest Plans, historic uses of the national forest transportation system will be reviewed and analyzed through a site-specific analysis that will comply with the agency's travel management regulations (36 CFR 212). As stated in the Summary of the Travel Management Rule (Federal Register, Vol. 70, No. 216, 2005), "The clear identification of roads, trails, and areas for motor vehicle use on each National Forest will enhance management of National Forest System lands; sustain natural resource values through more effective management of motor vehicle use; enhance opportunities for motorized recreation experiences on National Forest System lands; address needs for access to National Forest System lands; and preserve areas of opportunity on each National Forest for nonmotorized travel and experiences."

273. **Concern Statement:** The forest plan revision should explain how it defines "needs" of future generations and how those needs were determined.

Response: The Forest Service does not attempt to determine what the specific needs of future generations would be. The Multiple Use-Sustained Yield Act (1960) provides for the sustainability of the multiple uses of natural resources in ways that presently best meet the needs of the public, while maintaining the long-term productivity of the land, such that the goods and services that flow from lands would be available to future generations. The analysis of "Economic and Social Well-Being" in Chapter 3 of the Final Environmental Impact Statement provides further discussion.

274. **Concern Statement:** The Forest Service should honor the intent of the National Environmental Policy Act to ensure "productive and enjoyable harmony between man and his environment" by preventing ecological damage rather than simply mitigating actions through the forest plan revision.

Response: The Forest Service has developed the Blue Mountains Forest Plans consistent with the spirit and letter of the National Environmental Policy Act. Plan Components (such as goals, desired conditions, standards, and guidelines) have been developed to maintain the ecological integrity and long-term productivity of the land while honoring the sustainable multiple-use mandate of National Forests.

275. **Concern Statement:** The Forest Service should require a continuous supply of timber and resource commodities, per the Organic Act, the Multiple Use Sustained Yield Act, the National Forest Management Act, the Forest and Rangeland Renewable Resource Planning Act of 1974, and Public Law 86-517.

Response: All alternatives except Alternative E-Modified Departure have been developed to provide a non-declining or stable flow of wood products over time. The draft revised Forest Plan proposed increasing the timber volume objectives to roughly 150 percent of their recent levels across the three National Forests. The Forest Service received many comments on the draft revised Forest Plan expressing a desire to increase the flow of forest products to local mills to stimulate local economies. As a result, two

additional alternatives, including a "departure" alternative, which is unconstrained by the non-declining flow requirement, were developed. The methodology behind the calculation of estimated timber yields has been re-evaluated and improved for the Final Environmental Impact Statement. The timber volume objectives of the agency preferred alternative, E-Modified, would represent an approximate doubling of the volume sold in recent years from the three National Forests.

276. **Concern Statement:** The Forest Service should comply with Executive Order 13575, Establishment of the White House Rural Council, which supports expanding outdoor recreational activities on public lands.

    Response: To avoid duplication, the Forest Plans do not repeat all existing laws, policies, and regulations that govern national forest management. However, the National Forests will continue to operate under the revised Forest Plans consistent with applicable laws, regulations, and policies. Executive Order 13575 established a White House Rural Council. Since its inception, the Council has advanced numerous policy initiatives that strive to make investments in rural America and are designed to promote job growth. As noted above, the National Forests will remain consistent with applicable policies, including those developed by the White House Rural Council.

277. **Concern Statement:** The Forest Service should comply with Executive Order 13443, Facilitation of Hunting Heritage and Wildlife Conservation, particularly Section 2, when concerning actions that may affect hunting and fishing opportunities.

    Response: Executive Order 13443, along with other existing laws, regulations and policies, influenced the design and development of Forest Plan components (Final Environmental Impact Statement, Appendix A) for each plan revision alternative. Alternatives E-Modified and E-Modified Departure include new standards and guidelines to increase elk security and distribution across all seasonal ranges to encourage elk use of National Forest System Lands, thereby improving hunting opportunities. Similarly, plan components including desired conditions, standards, guidelines, management areas, and objectives for watershed function and riparian management areas, would promote improved water quality and overall stream conditions, thereby improving fishing opportunities.

278. **Concern Statement:** The Forest Service should more fully assess its "no adverse effects" statement of forest revision plan actions on low-income populations, as related to Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, because the Blue Mountains forests encompass counties at or below the poverty level. The plan should present accurate population data and work with locals on the best mitigation strategies to minimize impacts, such as by retaining full access.

    Response: The Final Environmental Impact Statement "Economic and Social Well-being" section, Environmental Justice discloses how the alternatives may affect low-income and minority populations. Relative to current management, only Alternative C was found to have the potential to disproportionately and adversely affect low-income and minority populations across the three socio-economic impact zones.

279. **Concern Statement:** The Forest Service should revise the forest plan to comply with the Migratory Bird Treaty Act.

    Response: The final plans comply with the Migratory Bird Treaty Act. The effects of the final revised Forest Plans and alternatives to migratory birds are analyzed in the

Final Environmental Impact Statement, Chapter 3, Environmental Consequences, in the Terrestrial Wildlife Species section.

280. **Concern Statement:** The Forest Service should explain how the forest plan complies with the Safe Drinking Water Act.

    Response: The Safe Drinking Water Act applies to public water systems that can be either community or non-community water systems, depending on the number of service connections or year-round users. The Forest Plans identify five municipal watersheds that are named as Management Area 2J and supply water to the communities of Long Creek, Canyon Creek, Baker City, La Grande and Walla Walla. In addition, the State of Oregon identifies six public source watersheds that supply water to the communities of Richland, Joseph, Sumpter, Prairie City, Pendleton, and Hermiston. The Forest Plans contain standards that require that all management actions are designed to protect water quality in all public supply watersheds and limit the use of fertilizers and other chemical that could harm water quality. Additional restrictions needed to protect water quality in these watersheds may be requested by individual communities and are subject to approval by the Regional Forester.

281. **Concern Statement:** The Forest Service should abide by the Taylor Grazing Act that limits the agency's ability to change the purpose of grazing areas.

    Response: The Taylor Grazing Act of 1934 intended to "stop injury to the public grazing lands [excluding Alaska] by preventing overgrazing and soil deterioration; to provide for their orderly use, improvement, and development; [and] to stabilize the livestock industry dependent upon the public range."

    Planning for units of the National Forest System involves two levels of decisionmaking. The first level of planning involves the development of a forest plan that provides direction for resource management of the entire planning unit. Forest plans set out forestwide and management area direction with standards and guidelines for future decision-making and are adjustable through amendment and revision. Forest plan management area and forestwide direction are the "zoning ordinances" under which future site-specific project-level planning decisions are made, the second level of forest planning. Forest plan approval establishes multiple-use goals, desired conditions, and objectives for the planning unit. Forest plan-level actions are approval, amendment, and revision (16 USC 1604(d) and (j), 1604(f)(4), and 1604(f)(5)).

    Forest Plan approval results in the following: Establishment of management areas and management area direction applying to future activities in that management area, including the suitability of lands for resource management (16 USC 1606(g)(2)(A) and 1982 Rule Provision 36 CFR 219.11(c)). The Forest Service therefore is acting within its authority when the purpose, or suitability, of a grazing area is changed.

282. **Concern Statement:** The Forest Service should adhere to the Rescission Act of 1995 by completing the grazing allotment management plans.

    Response: Allotment management plans are site-specific actions and are not included in the Forest Plan revision planning procedures.

283. **Concern Statement:** The Forest Service failed to develop a grazing suitability analysis on environmental consequences and alternative uses forgone in violation of Forest Service planning regulations.

Response: The results of the suitability analysis were included in the Methodology section in Appendix B of the draft Environmental Impact Statement. The suitability analysis and methodology has been moved to the "Livestock Grazing and Grazing Land Vegetation" section in Chapter 3 of the Final Environmental Impact Statement.

As stated, "a suitability determination is the process of evaluating a land area through a modeling of suitability and capability for a specified land use (such a permitted livestock grazing)." The resulting suitability determination—in this particular case for permitted livestock grazing—does not foreclose other land uses as directed by the Multiple Use Sustained Yield Act of 1960 (Public Law 86-517). Management activities for timber, range, outdoor recreation, watershed, wildlife, and fish purposes may be conducted concurrently and within the same area. The Multiple Use Sustained Yield Act directs the Forest Service to manage various renewable resources so that they may be used in combinations to best meet the needs of the American people.

284. **Concern Statement:** The Forest Service should minimize degradation of wetlands, required by Executive Order 11990 Protection of Wetlands and Executive Order 11988 Floodplain Management, by eliminating livestock use in riparian and floodplain areas.

Response: To protect aquatic and riparian ecosystems, while supporting multiple uses such as livestock grazing, the Forest Service strengthened plan components for aquatic and riparian ecosystems under Alternatives E-Modified and E-Modified Departure. These plan components make up the 2018 Blue Mountains Aquatic and Riparian Conservation Strategy (ARCS). Alternative C would make riparian areas unsuitable to livestock grazing.

285. **Concern Statement:** The Forest Service should emphasize use of federal lands for fish and wildlife, per the Federal Land Policy and Management Act of 1976, rather than for livestock.

Response: The revised Forest Plans will be consistent with existing law, regulation, and policy governing national forest management. The Forest Service has followed planning requirements for revising land management plans (forest plans), as required by the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (see 36 CFR part 219). The National Forest Management Act reinforces the multiple-use purposes of the National Forest System as specified in the Forest and Rangeland Renewable Resources Planning Act and the Multiple Use Sustained Yield Act. The National Forest Management Act specifies that forest plans provide for "multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use, Sustained-Yield Act of 1960, and in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness."

Multiple use is defined in the planning regulations (36 CFR 219.19) as "The management of all the various renewable surface resources of the [National Forest System] so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest

dollar return or the greatest unit output, consistent with the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528- 531)."

Planning: Management Areas

286. **Concern Statement:** The Forest Service should reduce or eliminate all General Forest Management Areas (4A).

    Response: The Final Environmental Impact Statement alternatives include a range of management area allocations. The acreage of Management Area 4A – General Forest varies between alternatives. Compared to the other alternatives, Alternative C would reduce the acres of land allocated to Management Area 4A – General Forest by approximately one half.

287. **Concern Statement:** The Forest Service should not propose any new "special area" designations.

    Response: The Wilderness Act and National Forest Management Act, together with their implementing regulations and policy, require the Forest Service to identify and evaluate lands that may be suitable for inclusion in the National Wilderness Preservation System and determine whether to recommend any such lands for wilderness designation. There are three tests in the evaluation process: capability, availability, and need. The identification and evaluation of areas for wilderness recommendation are included as an appendix in the Final Environmental Impact Statement. Proposals are preliminary administrative recommendations that will be further reviewed and possibly modified by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States. Congress has reserved the authority to make final decisions on wilderness area designation.

    Other special area designations may be made administratively through the forest plan revision process (36 CFR 219). These areas often conserve unique biophysical environments and contribute to the planning area's distinctive role within the broader landscape, offering additional recreational opportunity not usually encountered in general forest settings.

Planning: Monitoring

288. **Concern Statement:** The Forest Service should invest in robust multi-scale monitoring and adaptive management for each resource, including benchmarks and triggers for changes in management. Management activities should only occur if monitoring is funded. Monitoring should be done, at the watershed and landscape level, to track the progress toward planning goals.

    Response: The Responsible Official has the discretion to set the scope and scale of the monitoring program after considering, among many factors, the financial and technical capabilities of the Forest Service, to collect information most critical for the informed management of resources in the plan area. Each Forest Plan includes a monitoring section, designed to evaluate both the implementation and effectiveness of plan components. The evaluation of monitoring results may be used to assess progress toward achieving desired conditions and could lead to changes in forest plan direction. The monitoring program, however, does not apply to projects or activities. Project and activity monitoring may be used to gather information for the plan monitoring program, and information gathered through plan monitoring may be used to inform development

of projects or activities. However, monitoring is not a prerequisite for making a decision to carry out a project or activity [36 CFR §219.12(a)(7)].

289. **Concern Statement:** The Forest Service should develop key indicators that can be measured within the plan's 15- to 20-year timeframe and should re-evaluate its monitoring frequencies as it is difficult to determine resource trends in a short period of time like 1 or 5 years.

    Response: The Forest Service has both implementation and effectiveness monitoring that apply to projects after they are completed. Time requirements vary depending upon the type of project and the resources that are impacted. The Revised Forest Plans for the three National Forests are also proposing that adaptive management practices be implemented, thus encouraging the need for increased managed activities should monitoring results make such recommendations.

290. **Concern Statement:** The Forest Service should add more economic-based monitoring questions in the 37 questions within the Monitoring Plan Framework for the Action Alternatives for Each National Forest table.

    Response: Goal 3 of the plans is to "promote economic well-being." The Forest Service is one of many actors in both public and private sectors that influence social and economic conditions in the Blue Mountains region. National Forests contribute to economic well-being by providing jobs via a range of uses, products and services, and a quality of life, with the caveat that the Forest Service contributes to but does not, by itself, maintain the economic well-being of surrounding communities.

    The monitoring question related to economic well-being would assess whether the outputs of goods and services are being produced consistent with levels anticipated in the plans. This question addresses the outputs of many goods and services, for a variety of forest management activities, including the development of forest products; livestock grazing; special uses; mineral, energy and geological resources; and water uses. In other words, the economic monitoring question asks several questions in one.

Planning: Process

291. **Concern Statement:** The Forest Service should consider how adjacent non-federal landowners and resources may be affected by various alternatives.

    Response: We considered the potential effects of Forest Plan alternatives on neighboring non-federal landowners and resources. We consulted with federally recognized Tribes, engaged with State and County governments, and private landowners. We also consulted with other Federal agencies, particularly the U.S. Fish and Wildlife Service and National Marine Fisheries Service regarding the Endangered Species Act. In accordance with 36 CFR 219.7(c) of the 1982 Planning Rule, the Forest Service reviewed the "planning and land use policies of other Federal agencies, State and local governments, and Indian Tribes" with respect to the Forest Plans, and included the results of this review in the Final Environmental Impact Statement. As each National Forest develops projects under its revised Forest Plan, the Forest Service would continue to reach out to various stakeholders for their input to help us consider the potential effects of proposed projects on lands and resources affected by management actions undertaken on these National Forests.

292. **Concern Statement:** The Forest Service should not identify the preferred alternative in the draft forest revision plan before the public has a comment opportunity.

Response: Section 1502.14(e) of the Council on Environmental Quality regulations requires the section of the Environmental Impact Statement on alternatives to "identify the agency's preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement . . ." This means that if the agency has a preferred alternative at the Draft Environmental Impact Statement stage, that alternative must be labeled or identified as such in the Draft Environmental Impact Statement. If the responsible official has no preferred alternative at the Draft Environmental Impact Statement stage, a preferred alternative need not be identified there. At the time the Final Environmental Impact Statement is filed, Section 1502.14(e) presumes the existence of a preferred alternative and requires its identification in the Final Environmental Impact Statement "unless another law prohibits the expression of such a preference."

293. **Concern Statement:** The Forest Service should not cumulatively assess environmental impacts in the affected environment of the forest plan because it shows a disproportional impact on current resources that gives a false impression of the amount of degradation on the landscape.

    Response: Under National Environmental Policy Act regulations, we are required to analyze the cumulative effects on resources. It helps to account for past activities and place resource conditions in a historical context to inform management choices. For some resources, past activities have resulted in lasting impacts reflected in current conditions.

294. **Concern Statement:** The Forest Service should determine how a programmatic forest plan can provide specific project locations and activities so that the Tribes can analyze impacts.

    Response: As a programmatic plan conducted at a landscape-scale, Forest Plans provide broad direction for management but they do not direct site-specific activities and locations, except to designate management areas that are suitable for some, but not all, management activities. Upon adoption of the plans, project-level site-specific analysis would be conducted, at which time the Forest Service would consult with the Tribes for their review of potential impacts to Tribal resources and other concerns.

295. **Concern Statement:** The Forest Service should include the Hells Canyon National Recreation Area in this forest plan revision because this management plan has been in place since 2003, and it is due to be replaced every 10-15 years. Without the Hells Canyon National Recreation Area included, access issues are misstated.

    Response: The Hells Canyon National Recreation Area would continue to be managed per the 2003 Record of Decision. The Forest Service reviewed the Hells Canyon National Recreation Area Comprehensive Management Plan to determine if there was a need for change to revise that plan. The Analysis of the Management Situation (reflected in the 2004 Current Management Situation) for the Hells Canyon National Recreation Area showed there was no need for change in this area of the Wallowa-Whitman National Forest. As a special area, the management direction for the Hells Canyon National Recreation Area may be brought forward, unmodified, as part of the Wallowa-Whitman National Forest Plan, under provisions of the 1982 planning rule at section 219.2(b). The 2003 decision achieves the objectives of the Hells Canyon National Recreation Area Act (PL 94-199) establishing the Hells Canyon National Recreation Area, the Hells Canyon Wilderness, and the Rapid and Snake Wild and Scenic Rivers; the Oregon Wilderness Act of 1984 (PL 98-328); the Omnibus Oregon Wild and Scenic Rivers Act (PL 100-552); Public and Private Land Use Regulations (36 CFR 292); and

Forest Plan content regulations (36 CFR 219.11). Existing management direction for the Hells Canyon National Recreation Area has been considered under cumulative effects where appropriate for given issues and resource areas, including access.

Planning: Separate Plans

296. **Concern Statement:** The Forest Service should create a separate land management plan for each national forest to better address community input and socio-economic factors. Desired conditions for resources differ across forests, and managers would be unnecessarily limited by plan-wide elements.

    Response: Based on public and internal comments, we have decided to create three individual Forest Plans for each National Forest (Malheur, Umatilla, and Wallowa-Whitman).

Planning: Standards and Guidelines

297. **Concern Statement:** The Forest Service should use measurable standards rather than guidelines to minimize Forest Service interpretation. Standards, required by the National Forest Management Act and providing for legal accountability, should be written using best management practices and best available science. More standards and guidelines would help ensure the plan's success.

    Response: Although current Forest Plans may have not clearly distinguished between standards and guidelines, and given the public impression that guidelines may be optional, the proposed Plans have carefully defined standards and guidelines in the Blue Mountains Forest Plans:

    - Standards are mandatory constraints upon project and activity decisionmaking. They are established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
    - Guidelines are a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

    In other words, guidelines serve the same purpose as standards but they differ from standards in that guidelines provide some flexibility to comply (i.e., meet the intent of the guideline) while standards are absolute constraints. Guidelines are not optional and must be followed unless alternative methods that meet the intent or purpose of the guidelines are adopted and documented in the project record. The Forest Service reviewed guidelines and standards in the draft Forest Plans to verify whether some guidelines should be standards, and vice versa. Additionally, the Forest Service has clarified the intent of each guideline.

298. **Concern Statement:** The Forest Service should make edits, insertions, and deletions, to the draft forest revision plan's existing standards and guidelines using italics, strikethroughs or other means to show exactly what was changed between the Draft and Final Environmental Impact Statements.

    Response: Tracking changes in the document using italics and strikethroughs was not a practical way to display changes because, due to the volume of edits, it would leave the final statement too difficult to read. A summary of what has changed between the Draft

and Final documents is available in the Preface of Volume 1 of the Final Environmental Impact Statement. In addition, Forest Plan components for the modified alternatives can be compared to the other alternatives in Volume 3, Appendix A of the final Environmental Impact Statement.

299. **Concern Statement:** The Forest Service should use fewer standards and guidelines in the revised forest plans to avoid restricting active management and to allow project-specific flexibility to meet objectives.

    Response: The Forest Service designed the Blue Mountains Forest Plans with degrees of flexibility to limit the need for future amendments. The Forest Plans include a variety of components (desired conditions, standards, guidelines) that serve as management tools. These plan components provide consistency, where appropriate, across the National Forests. They also provide flexibility, where appropriate, for project-level decisions. Standards and guidelines are a case in point. Although some past Forest Plans have blurred the meaning between what is a standard versus a guideline, the Forest Service carefully defined both terms in the Blue Mountains Forest Plans:

    - Standards are mandatory constraints upon project and activity decisionmaking. They are established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
    - Guidelines are a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

    In other words, guidelines serve the same purpose as standards but they differ from standards in that guidelines provide some flexibility to be comply with the intent of the guideline, while standards are absolute constraints. The Forest Service has reviewed the guidelines and standards in the draft Forest Plans to verify whether some guidelines should be standards and vice versa. Furthermore, the Forest Service has clarified the intent of each guideline.

300. **Concern Statement:** The Forest Service should rely on the 1990 land and resource management plan's standards and guidelines rather than making new ones. In addition, the Forest Service should assess if the 1990 standards and guidelines have been met and how effective they have been.

    Response: The 2010 Revised Need for Change and the project purpose and need (Final Environmental Impact Statement, Chapter 1) explain the reasons for revising the forest plans. Much of the need for change is driven by a need to (1) apply new science findings, particularly for terrestrial and aquatic habitats; (2) manage fuels and fire risk; (3) build ecological resiliency in the face of a changing climate; and (4) adequately recognize the interdependency of social and economic conditions with national forest management. The important issues today are somewhat different than the issues addressed by the Forest Plans of 1990. The proposed plan components reflect these differences. Many existing plan components have corollary components in each of the action alternatives. These components can be compared across all alternatives, including Alternative A (or no change) in Volume 3, Appendix A of the Final Environmental Impact Statement.

Plants

Plants: Current Inventories

301. **Concern Statement:** The Forest Service should survey, map, monitor and buffer all sensitive plants. It should also disclose known locations and grazing areas that will be affected.

    Response: To help conserve sensitive plants during the design and implementation of management activities, the Forest Service modified or added new standards and guidelines to Alternative E-Modified and E-Modified Departure. Grazing activities that may be affected by the presence of sensitive plants would be determined during site-specific environmental analysis at that time.

Plants: Diversity

302. **Concern Statement:** The Forest Service should provide for plant diversity as required by NFMA by eliminating grazing in riparian areas, limiting herbicide use, and prohibiting clear-cutting and managing forests as plantations.

    Response: The Forest Service highlighted species diversity in the purpose and need to revise the Forest Plans (Final Environmental Impact Statement, Chapter 1). The goals and desired conditions for species diversity for all alternatives are found in Appendix A of this document (1.2 Species Diversity). The revised plan alternatives direct the management of riparian ecosystems through several standards and guidelines (see Appendix A). Additionally, the plan revision alternatives include guideline IS-4G that would require measures to prevent the establishment and spread of invasive species be developed during site-specific project planning.

303. **Concern Statement:** The Forest Service should create standards to protect peatlands from all management activities that may degrade such habitat.

    Response: Alternative E-Modified provides desired conditions for groundwater-dependent ecosystems, which include peatlands, at 1.1.3 and 3.3.5. Alternatives B, E, E-Modified, E-Modified Departure and F include a guideline (FLS-2G) that would not authorize grazing in the sensitive peatland habitat. As a type of wetland, peatlands would be managed through additional standards and guidelines for riparian management areas described under Management Area 4B. These plan components and other plan content would:

    - Protect and maintain the ecological integrity of terrestrial and aquatic ecosystems and watersheds, riparian areas, and water quality and water resources,
    - Restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds, riparian areas, and water quality and water resources,
    - Contribute to the recovery of Federally-listed species, conserve proposed or candidate species, and maintain viable populations of species of conservation concern, and
    - Identify watershed(s) that are a priority for protection, maintenance or restoration.

    Please refer to the direction for Management Area 4B in Appendix A for the full set of standards and guidelines directing riparian area management for all alternatives.

Plants: Nonnative

304. **Concern Statement:** The Forest Service should treat noxious weeds to protect watershed function, species diversity and productive capacity. Treating weeds would also prevent weed spread from national forests to private lands. Ventenata, medusa head, and non-native fungi should be considered in addition to cheat grass.

    Response: All plan revision alternatives include objectives for treating invasive plants, which include noxious weeds, as well as standards and guidelines for projects planning to treat noxious weeds. The decision of what, where, when, and how to treat invasive plants is not made in a forest plan, but during project-level planning.

305. **Concern Statement:** The Forest Service should consider preventing new invasive plant infestations, detecting new invaders early, and the feasibility of eradication or control. It should use trained observers, sampling, and monitoring based on invasive plant biology and dispersal vectors. Adaptive management should be used, and the cost and effectiveness of treatment should be considered. Several commenters suggested spread of invasive plants by wildlife and water should also be considered.

    Response: All alternatives include objectives for treating invasive plants. Alternative E has been modified to include additional standards and guidelines that direct project-level actions be planned and implemented to prevent the establishment or spread of invasive plants. Alternative E-Modified plan standards further require an integrated approach to invasive species management, including the early detection of new invaders. The decision of when, where and how to treat invasive species, including a cost-benefit analysis considering treatment options, would be undertaken during project-level planning and analysis.

306. **Concern Statement:** The Forest Service should control and prevent spread of invasive plants by not building new roads, not opening closed roads, applying herbicides by hand, and hand-pulling weeds whenever possible. Others suggested keeping roads open to ease monitoring and treatment of invasive plants and using approved herbicides and biocontrol.

    Response: The alternatives include several forestwide standards and guidelines to prevent the establishment and spread of invasive plants. Alternative E-Modified and E-Modified Departure include guideline (IS-3G) to consider all methods, including prevention and treatment using manual, cultural, mechanical, chemical and biological agents as methods when planning invasive plant control actions. The decision of when, where and how to treat invasive species would be undertaken during project-level analysis.

307. **Concern Statement:** The Forest Service should consider allowing use of non-native seeds to reduce erosion, supply short-term forage, prevent establishment and spread of invasive weeds, and provide cover for surviving native plants. Native seeds have lower success rates than non-natives, and the total cost of management may increase over time if invasive plants are allowed to establish. Oregon Certified Seeds should be considered.

    Response: The Forest Service determines during project-level planning the composition of seed mixes to be used for revegetation, restoration and rehabilitation. Current Forest Service policy (FSM 2070.3) places primary consideration on native species when planning projects but allows for the use of non-native species in certain circumstances.

308. **Concern Statement:** The Forest Service should change the standard that requires minimizing or preventing the establishment or spread of invasive plants to a guideline.

    Response: The Forest Service modified the revised Plans (Alternative E-Modified) and changed this standard to a guideline (see guideline IS-4G).

309. **Concern Statement:** The Forest Service should create a standard to measure soil disturbance in order to prevent invasive plant establishment and spread.

    Response: The plan revision alternatives, including Alternative E-Modified, include components to prevent the establishment and spread of invasive plants. Several forestwide guidelines (IS-4G, IS-5S, IS-6S, IS-8G), address the prevention and restoration of disturbed sites when conducting management activities.

Plants: Sensitive

310. **Concern Statement:** The Forest Service should discuss the difference between Forest Service and Nature Conservancy estimates of Spalding's catchfly populations.

    Response: The Forest Service modified the Final Environmental Impact Statement (Volume 2, Chapter 3, "Plant Species Diversity and Threatened, Endangered, and Sensitive Plants") to clarify the differences between the Forest Service and Nature Conservancy estimates for the Spalding's catchfly population sizes.

311. **Concern Statement:** The Forest Service should develop standards rather than guidelines to protect sensitive plant species, particularly those found in the sagebrush shrubland habitat group.

    Response: The Forest Service modified or added new forestwide guidelines to Alternative E-Modified to reduce impacts to sensitive plants. The plan defines a guideline as "a constraint on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. Guidelines serve the same purpose as standards but they differ from standards in that they provide flexibility in defining compliance, while standards are absolute constraints."

312. **Concern Statement:** The Forest Service should not assume that logging will improve aspen habitat.

    Response: The Forest Service modified the Final Environmental Impact Statement to elaborate how the alternatives would affect sensitive plants inhabiting aspen habitat.

313. **Concern Statement:** The Forest Service should consider eliminating grazing and motorized use from fragile lithosol plant habitats.

    Response: The Forest Service considered but eliminated from detailed study alternatives that would have halted grazing (Alternative G – Minimum Management and Alternative J – No Grazing). The Forest Service modified the Environmental Impact Statement to elaborate how the alternatives would affect sensitive plants inhabiting lithosols. Site-specific decisions regarding motorized use on the National Forests is not within the scope of forest planning and would be conducted through a subsequent planning effort.

314. **Concern Statement:** The Forest Service should not manage for sensitive species.

Response: The Forest Service has a statutory and policy requirement to manage sensitive species. The Final Environmental Impact Statement identifies the need to maintain diversity of species, including plants, in the purpose and need to revise the forest plans (Chapter 1). The Forest Service manages for sensitive species as one means, among several, to satisfy the species diversity requirements under the National Forest Management Act at 36 CFR 219.26. "Sensitive species" are defined (Forest Service Manual 2670.5) as "plant and animal species identified by a regional forester for which population viability is a concern, as evidenced by:

- Significant current or predicted downward trends in population numbers or density.
- Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution."

Plants: Standards and Guidelines

315. **Concern Statement:** The Forest Service should create an exception for human health and safety to the guideline discouraging wildland fire suppression lines in threatened, endangered, and sensitive plant species habitat.

    Response: The Forest Service modified the guideline for Alternative E-Modified (FLS-8G) to include an exception when necessary to provide for the protection of human life and public safety.

316. **Concern Statement:** The Forest Service should monitor and require buffering and protection for Macfarlane's four o' clock.

    Response: The Forest Service determines the need to survey for threatened, endangered and sensitive plants during project-level planning and analysis. Alternative E-Modified and E-Modified Departure include several standards (RE-5S, FLS-3S, FLS-5G, FLS-6S, FLS-7G, FLS-8G, FLS-9S, FLS-10G, FLS-11S, FLS-13G, FLS-14G, LH-4G), for the protection of threatened and endangered species, including the federally listed (threatened) MacFarlane's four o'clock.

317. **Concern Statement:** The Forest Service should remove guidelines discouraging road construction, timber harvest, slash piles and fuels management, and trail construction in threatened, endangered and sensitive plant species habitat because such issues will be resolved by project-level consultation. The buffers associated with these guidelines have no scientific basis.

    Response: The Forest Service modified the standards and guidelines designed to reduce impacts to threatened, endangered, proposed, candidate, and sensitive species plants in Alternative E-Modified. Specific avoidance buffers have been removed and replaced with a standard or guideline specifying that management actions avoid adverse effects or impacts to these categories of plant species. The means by which adverse effects or impacts would be avoided would be determined during project-level planning.

Public Involvement

Public Involvement: Collaboration and General

318. **Concern Statement:** The Forest Service should not state that the plan, including its goals and desired conditions, were developed through a collaborative process. The plan should detail, however, how the Forest Service will ensure and improve engagement of

local collaboratives and new partnerships to achieve the plan's vision, for example by partnering with existing collaboratives to create restoration and monitoring synergies across agencies.

Response: Because "collaboration" may connote a unique process in Forest Service planning, specifically working with local collaborative groups, the Forest Service has revised our language to state that the Forest Plans have benefited from extensive public input. Moving forward, the Forest Service has strengthened the discussion regarding the value of local collaborative groups and partnerships in achieving the goals and desired conditions of the Forest Plans.

319. **Concern Statement:** The Forest Service should listen to the voices of neighboring small forestland owners, including ranchers and loggers, and add a consulting requirement to the plan to consider their needs. To assist private landowners, it should partner with the Natural Resources Conservation Service and the Oregon Department of Forestry.

    Response: The Forest Service regularly listens to and considers the needs of neighboring landowners. At the programmatic level, the forest plan revision process has included opportunities for neighboring landowners to provide input during the scoping and formal comment periods as well as during public meetings. At the project level, the Forest Service provides additional opportunities for public input, including formal comment periods. Outside of formal planning processes, the Forest Service seeks to assist neighboring landowners by working with other agencies such as the Natural Resources Conservation Service and State Departments of Forestry. Also, through its State and Private Forestry division, the Forest Service provides technical and financial assistance to States, Tribes, communities, and non-industrial private landowners.

320. **Concern Statement:** The Forest Service should weight comments by local community members and those who would be affected economically more heavily than others.

    Response: National forests are managed for the benefit of all Americans; therefore, we consider all substantive comments received, regardless of the source. Substantive comments are those that are within the scope of the proposal, are specific to the proposal, and have a direct relationship to the proposal. If local community members and those who would be affected economically submitted substantive comments, then those comments were considered in the planning process.

321. **Concern Statement:** The Forest Service should equally consider all public voices, including the range of recreation interests as well as ranchers, farmers, wood gatherers, and hunters.

    Response: We consider all substantive comments received, regardless of the source. See the previous response regarding substantive comments.

Public Involvement: Cooperation-NEPA

322. **Concern Statement:** The Forest Service should share draft NEPA documents with cooperating agencies prior to full public release. The Forest Service should include an accurate list of cooperating agencies, reflecting current memoranda of understanding, in the Forest Plans.

    Response: We shared the Draft Environmental Impact Statement with cooperating agencies prior to full public release. The revised Forest Plans and this Final

Environmental Impact Statement include an accurate list of cooperating agencies based on current memoranda of understanding.

Public Involvement: Coordination-NFMA

323. **Concern Statement:** The Forest Service should recognize and give standing to county and state ordinances, laws, and plans that address natural and cultural resource management, through coordination. The forest revision plan should show how it has involved each coordinating county in the process and discuss its attempts to resolve any conflicts that exist with local plans, ordinances, or laws. In addition, commenters requested adherence to a variety of county and state laws, including the Oregon Department of Fish and Wildlife's waste regulations and Washington's Growth Management Act and OHV use laws.

    Response: Because national forest management may affect other government jurisdictions, the Forest Service seeks input from Tribes, States, Counties, and other government entities in a number of ways. The formal comment period is an important source of government input. Additional opportunities exist for the Forest Service and other government agencies to cooperate and coordinate.

    Cooperation: Under the National Environmental Policy Act (NEPA) and implementing regulations, government agencies can agree to serve as cooperating agencies. Cooperating agencies work with the Forest Service to share information and shape successful plans. Cooperating agencies may participate in special briefings and discussions with the Forest Service during the planning process. Cooperating agencies may also have access to select draft documents in advance of the publication of the Final Environmental Impact Statement and revised Forest Plans. Where they have special expertise, cooperating agencies can provide information to the Forest Service (such as social and economic information), which is interpreted by a technical expert on the revision team. Moreover, cooperating agencies are listed in the Final Environmental Impact Statement and revised Forest Plans.

    Coordination: The National Forest Management Act (NFMA) and its implementing regulations state that "the responsible line officer shall coordinate regional and forest planning with the equivalent and related planning efforts of other federal agencies, state, and local governments, and Indian tribes" (36 CFR 219.7, 1982). As part of the forest plan revision process, the Forest Service reviews government planning and land-use policies; considers the objectives expressed in those plans and policies; assesses the interrelated impacts of the plans and policies; determines how the revised Forest Plans should deal with the identified impacts (consistent with federal laws, policies, and regulations); and considers alternatives for resolving conflicts with the Revised Forest Plans (36 CFR 219.7(c), 1982). The results of Forest Service coordination reviews with respect to the Blue Mountains Forest Plans are included in the project record.

    To conclude, the Forest Service is the lead agency and maintains decision-making authority on the Forest Plans. The Forest Service also strives to work with neighboring governments on forest management activities by exchanging information and seeking win-win solutions whenever possible, including through cooperation and coordination.

324. **Concern Statement:** The Forest Service should coordinate with County governments to determine what impacts Forest Service road closures will have on County land management plans.

Response: See the response above regarding coordination. In addition, road closures are determined through site-specific project analysis and decisions that occur outside of the forest plan revision process. Consistent with existing law, policy, and regulation, the Forest Service will continue to work with County governments regarding site-specific decisions.

Recreation and Scenery

Recreation: Developed Recreation

325. **Concern Statement:** The Forest Service should create a desired condition for the continued maintenance of developed facilities.

    Response: We recognize the need for continued maintenance of developed facilities, while also recognizing a high level of deferred maintenance for recreational facilities. Considering these existing conditions, the desired condition for Goal 2.2.1 – Developed Recreation states: "Developed facilities, such as campgrounds, restrooms, picnic areas, trailheads, snow parks, and boating and fishing sites, are well maintained, fully functional, provide for visitor safety, and are accessible to people with disabilities." The type of use typical at developed facilities requires ongoing maintenance to meet user expectations. The stated desired condition is responsive to these facility conditions and user expectations.

326. **Concern Statement:** The Forest Service should create a developed recreation management allocation for the area around the Wallowa Lake Tramway.

    Response: For all alternatives analyzed in the Environmental Impact Statement, the existing Wallow Lake Tramway permit area is allocated to Management Area 5 – Developed Sites and Administrative Sites. The area allocated to MA 5 includes the tram line and the summit area operations. Desired conditions for this allocation include the subheading "Permitted Recreation Facilities," which includes such permitted sites as lodges, organization camps, and trams. The area adjacent to the permitted area is allocated to varying management areas, ranging from general forest to backcountry nonmotorized, and is based on the theme for each of the different alternatives. Future developed recreation activity in the adjacent area would be analyzed through a separate, site-specific process that would include project-level analysis and public involvement and participation.

Recreation: Dispersed Recreation

327. **Concern Statement:** The Forest Service should not require visitors to go through private providers to access dispersed recreation sites and should not turn popular dispersed recreation sites into fee areas.

    Response: The desired condition for Goal 2.3.3 – Backcountry Recreation was reviewed and edited for clarity. The revised Forest Plans do not intend to or provide management direction to privatize dispersed recreational opportunities. The revised desired condition states: "Partnerships with private providers sustain specialty services, such as backcountry skiing, jet boat and raft trips, aircraft, and big game outfitting and guiding services." These types of uses are usually provided through special use permit holders to operate specialty outfitting and guide services under special use authorizations, forming

a partnership to provide additional services beyond the Forest Service's operating capabilities.

Recreation: Increase Opportunities

328. **Concern Statement:** The Forest Service should strengthen recreation access and opportunities because of the impact of recreation on local economies and the recent growth of this sector.

Response: We recognize the importance of national forest access for its contribution to local economies and for providing access for recreation- and subsistence-related activities for visitors and users. The "Economic and Social Well-being" section in Chapter 3 of the Final Environmental Impact Statement describes economic impact zones and the contributions provided by recreation-related activity in the Blue Mountains national forests. As stated in the Final Environmental Impact Statement, "For all alternatives, the quantity of recreation visits to the national forests in not expected to vary from current use levels. The current supply of recreational opportunities is expected to exceed demand for the foreseeable future."

Recreation: Mountain Bike Support

329. **Concern Statement:** The Forest Service should allow mountain biking in all areas that aren't wilderness and should directly reference mountain biking rather than using the phrase "nonmotorized mechanized travel" to avoid confusion.

Response: We agree that mountain biking represents a legitimate recreational use of the national forests and provides benefits for both users and Forest Service management. Though not specifically listed in the Suitability Matrix for Management Areas in the revised Forest Plans, mountain biking is generally suitable in all forest management areas, except for designated wilderness (Management Area 1A – Congressional Designated Wilderness Areas). As stated in the Final Environmental Impact Statement regarding bicycle use in Management Area 1B (Preliminary Administratively Recommended Wilderness): "Mechanized use (bicycles) would be restricted to system roads and trails until Congressional designation, and then mechanical use would be prohibited." An additional guideline was developed for the revised Forest Plans to provide additional management direction regarding mountain bicycle use in Management Area 1B. The new guideline states:

MA1B-2G Mechanized (bicycle) use on existing trails and nonmotorized travel may occur in recommended wilderness areas.

Edits were made to the revised Forest Plans and Environmental Impact Statement that added the term "bicycle" in parentheses to follow instances of "mechanized use" for improved clarity.

330. **Concern Statement:** The Forest Service should develop plans to build more mountain bike trails in all three national forests to improve opportunities and benefit local economies. Roads closed to motorized use could be converted to mountain bike trails.

Response: The revised Forest Plans do not develop specific plans for specific management and user activities, but instead provide programmatic management direction that guides future management activity on the three National Forests. Site-specific and project-level planning for recreational uses on the National Forests must

comply with the revised Forest Plans, and would conform to direction in the National Environmental Policy Act including public involvement and participation.

The desired condition for Goal 2.6 – Roads and Trails Access states: "Opportunities for trails where motor vehicle use is prohibited are emphasized in backcountry and wilderness areas and provide a range of difficulty for a variety of recreational experiences, including mechanized transportation (except in wilderness areas), foot travel, and pack or riding stock. Trails are located to provide experiences in different ecosystem types and scenic settings and do not contribute to natural resource damage." Additionally, the desired condition includes management direction recognizing that "Forest Service recreation sites are connected to each other and to adjacent communities through pathways, trails, bike lanes, and waterways providing opportunities for both motorized and/or nonmotorized modes of travel and providing for loop-riding opportunities."

Based on these desired conditions contained within the Forest Plans and other recreation-related plan components, the revised Forest Plans do not prohibit trail expansion for mountain bike activity.

Scenery

331. **Concern Statement:** The Forest Service should not manage for scenery because it will restrict public use and resource management. The Forest Service should define "scenic integrity levels" (SCEN-1).

Response: The Forest Service provides for scenery management as outlined in Forest Service Manual 2380 – Landscape Management. The directives result from complying with statutory requirements including the Multiple-Use Sustained Yield Act of 1960, the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by the National Forest Management Act of 1976, and rules at Title 36 of the Code of Federal Regulations, Part 219, among others.

In 1995, the Forest Service replaced its previous scenery management system, the Visual Management System, with the Scenery Management System. These systems are both structured to primarily emphasize "natural appearing" scenery, but the Scenery Management System recognizes the positive scenic values associated with some human modified (cultural) features and settings that are valued for their scenic influence. The Scenery Management System allows for a "seamless" analysis and conservation of aesthetic values, and provides a systematic approach for determining the relative value and importance of scenery on National Forest System lands.

Definitions related to the Scenery Management System are located in Volume 3 of the Final Environmental Impact Statement in the Glossary.

332. **Concern Statement:** The Forest Service should conserve "in-depth" scenery, add large trees and mature forest as important scenic attributes, and acknowledge that nature viewing is the fastest-growing nature-based recreation. It should also quantify scenic character and scenic stability.

Response: We recognize the importance of conserving scenic values for ecological considerations and for the economic contributions relating to recreation. The most recent findings of the National Visitor Use Monitoring report (2014) indicate that viewing natural features ranked second for activity participation, with 39.2 percent of

respondents selecting this activity; and 9.9 percent of respondents citing this as their main activity for the Blue Mountain national forests.

The desired condition for Goal 1.14 – Old Forest and Individual Old/Large Trees provides additional management direction for this resource that supports social value: "Old forests and trees provide a variety of ecosystem services and social values and old forest conservation is integrated and balanced with other ecological and economic desired conditions to the extent practicable."

Scenery is quantified in the revised Forest Plans in Goal 2.1 – Scenery, through the use of the Scenery Management System, and includes forestwide desired conditions for scenic integrity and scenic stability. Additionally, each scenic class includes desired conditions specific to each class.

333. **Concern Statement:** The Forest Service should not classify areas as Scenic Class I that have existing transportation or utility infrastructure or proposed transmission lines.

Response: Scenery is inventoried and categorized into one of seven scenic classes with Scenic Class 1 being highly valued and distinctive and Scenic Class 7 being not distinctive and valued the least. The Environmental Impact Statement provides the percent distribution of scenic classes for each of the Blue Mountains national forests (see table next page). As noted in the effects section in Chapter 3 for Scenery Resources: "Visual disturbances can include road construction, mining, utilities development, recreation facilities, ski areas, and other special uses. These types of activities generally would not improve scenic integrity or stability in the long term . . . The level of development of these activities is anticipated to only have negligible variations between alternatives and not to an extent that would result in different scenic integrity of stability." Utility developments would be evaluated during project-level planning to achieve scenic integrity and stability desired conditions.

334. **Concern Statement:** The Forest Service should provide information on all scenic classes and the current condition of the landscape as it relates to those scenic classes so the public can better understand management objectives and direction.

Response: Information for scenic classes is presented in the Final Environmental Impact Statement. Scenery is inventoried and categorized into one of seven scenic classes with Scenic Class 1 being highly valued and distinctive and Scenic Class 7 being not distinctive and valued the least. The Environmental Impact Statement provides the percent distribution of scenic classes for each of the Blue Mountains national forests in the Affected Environment – Scenery Resources section and is also presented in the table below.

Percent distribution of scenic classes for each national forest

Scenic Class	Malheur	Umatilla	Wallowa-Whitman
1	15	37	46
2	45	37	36
3	32	18	14
4	2	1	NA
5	6	7	4
6	NA	NA	NA
7	NA	NA	NA

The scenic class map for each National Forest is contained in the Forest Plan appendix illustrating the scenic class distribution for each respective national forest.

Social and Economic

Social and Economic: Analysis

335. **Concern Statement:** The Forest Service should focus more on the impact the Forest Plans have on local governments and economies – including loss of industry infrastructure. Social and economic cumulative effects should be described, including impacts from the Sage-grouse Plan.

    Response: The Blue Mountains Forest Plans and Environmental Impact Statement address the relationship between Forest Service management and local economies. "The quantity and quality of forest products and services provided by the national forests contribute to the local economy and the maintenance of local infrastructure. Infrastructure and the local workforce, in turn, play a critical role in the capacity of national forests to conduct forest management activities. The mix of uses, products, and services the Forest Service expects to provide over time will be stated in the forest plans" (Vol. 1). Many comments requested that the Environmental Impact Statement recognize the economic importance of public lands to local economies. The Environmental Impact Statement does include an economic impact analysis of national forest outputs to the three socio-economic impact zones. The economic analysis uses the finest geographic scale possible, functional economic areas containing multiple counties, using standard methodologies. The social and economic cumulative effects have been updated between the Draft Environmental Impact Statement and the Final Environmental Impact Statement to include greater sage-grouse planning efforts and other past, present, and reasonably foreseeable actions.

336. **Concern Statement:** The Forest Service should incorporate more detail in its social analysis and assess how forest management affects employment, schools, mental health, addiction, domestic violence, as well as the safety, welfare, subsistence uses, and cultural ties of local residents. Indicators of impact on social well-being should reflect local values.

    Response: The Environmental Impact Statement does estimate how national forest management actions contribute to employment and labor income in the areas that surround the three National Forests (Vol. 1). The Forest Service cannot make cause-and-effect statements about the relationship between forest management and schools, mental health, addiction, poverty, domestic violence, and public safety because existing literature does not identify causal relationships between Forest Service management and these measures of social well-being. In response to comments, the Affected Environment section has been updated to track more indicators of social well-being, including those mentioned in the above comment.

337. **Concern Statement:** The Forest Service should account for economic and social conditions of individual communities.

    Response: The best available information on demographic and economic conditions in areas that surround the Blue Mountains national forests are at the county level. Therefore, the social and economic Affected Environment section presents baseline data for counties in the three socio-economic impact zones. Additionally, the economic

impact analysis relies on functional economic areas, which are an aggregation of counties. Attempting to estimate community-level economic effects would be inaccurate because it would fail to account for the flow of goods, services, and people among communities in the Blue Mountains planning area.

338. **Concern Statement:** The Forest Service should analyze the effect of management activities on community structure.

    Response: The Environmental Impact Statement does estimate how national forest management actions contribute to employment and labor income in the areas that surround the three National Forests (Vol. 1). We identify how the Forest Service contributes to local economies. The Forest Service cannot make cause-and-effect statements about the relationship between national forest management and changes in community structure because existing literature does not identify such effects. In response to comments, we have updated the Affected Environment section to track more indicators of social well-being.

339. **Concern Statement:** The Forest Service should conduct a cost-benefit analysis for each alternative (including on the issue of closing roads) and should include information on cost per unit of treatment, return on investment, and certainty of success. Cost-efficient alternatives, impacts on net present value, and impacts on local jobs should be described. The magnitude of effect (positive and negative) should be described. Long-term effects and externalities should be considered.

    Response: The Environmental Impact Statement includes a cost-benefit analysis that addresses the Forest Service expenditures and receipts. A more detailed cost-benefit analysis that addresses, for instance, costs per unit of treatment or the cost of closing roads, cannot be estimated with available information. As a plan revision, this document does not consider site-specific management actions. Treatment costs or road costs cannot be known without site-specific information. More detailed cost-benefit analysis will be included in subsequent project-level environmental analysis documents, where economic efficiency is identified as an issue.

340. **Concern Statement:** The Forest Service should quantify the value of fish, wildlife, plants, and ecosystem service losses and gains resulting from each alternative.

    Response: The Forest Service estimates how agency management activities outlined in the Forest Plan including opportunities for fishing, hunting, wildlife viewing, and forest products gathering contribute to the regional economy. Data do not show differences in opportunities for fishing, hunting, wildlife viewing, and forest products gathering among the alternatives analyzed in the Environmental Impact Statement; however, subsequent analyses of site-specific projects will have data to show differences among project alternatives and outcomes on the ground. The Environmental Impact Statement does include a viability assessment for threatened, endangered, Forest Service sensitive, and surrogate species (Vol. 2) and evaluates trade-offs among alternatives.

341. **Concern Statement:** The Forest Service should analyze the effect of road closures and limiting motorized use on local economies and communities' ability to attract new industry. Motorized recreation has a significant positive impact on local economies. The impact of trail closures and changes in recreation management on the economies of local communities should also be assessed.

    Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. That will be done through travel management planning as defined by the

Travel Management Rule. Access is analyzed in the Final Environmental Impact Statement and includes a range of alternatives that vary the amount of area (acres) that are rated suitable for either motorized or nonmotorized use, and rated for both summer and winter use. Subsequent analyses of projects under the Forest Plan will have site-specific data to show differences among project alternatives and their effects on motorized travel. Recreation visitation in general, related to motorized travel specifically, is not expected to change under any alternative analyzed in the Environmental Impact Statement. Visitor expenditures in rural communities would not change under any alternatives. Specifically, the Environmental Impact Statement states: "For all alternatives, the quantity of recreation visits, including wildlife-related recreation, and local visits, to the national forests is not expected to vary from current use levels. The current supply of recreational opportunities is expected to exceed demand for the foreseeable future. Therefore there is no estimated change to the overall level of recreation related expenditures, so no change is estimated for jobs and income supported by these expenditures." (Vol. 1)

342. **Concern Statement:** The Forest Service should reconsider its assumption that recreational visits won't change regardless of how lands are managed and should incorporate an assessment of recreation-related jobs in its analysis of economic and social well-being.

    Response: Based on professional judgement and best available information, regional office specialists conclude that the supply of recreation opportunities on the three National Forests would continue to exceed demand for recreation opportunities under all alternatives. Only when demand exceeds supply does a change in recreation opportunities have an economic effect. As stated in the Environmental Impact Statement: "For all alternatives, the quantity of recreation visits, including wildlife-related recreation, and local visits, to the National Forests is not expected to vary from current use levels. The current supply of recreational opportunities is expected to exceed demand for the foreseeable future. Therefore there is no estimated change to the overall level of recreation related expenditures, so no change is estimated for jobs and income supported by these expenditures." (Vol. 1)

343. **Concern Statement:** The Forest Service should provide a more complete analysis of the social and economic impacts of the alternatives including any reasonably foreseeable impacts to the industry infrastructure, local dependent communities, and jobs (logging, treating weeds, conducting watershed restoration, etc.). The relationship between National Forest management and wood products manufacturing (Goal 3.3.1) should be recognized, and details regarding sawlog, non-sawlog and biomass components of the current and planned timber harvest should be incorporated.

    Response: The Final Environmental Impact Statement provides analysis of social and economic impacts of the alternatives in terms of infrastructure, local communities, and natural resource-related jobs. Based on this comment and similar comments, Forest Service specialists added more information related to social and economic impacts associated with changes in infrastructure as well as the effects of changes in infrastructure on local communities and natural resource jobs.

    Specifically, the Environmental Impact Statement describes trends related to changes in infrastructure, local communities, and natural resource-related jobs. For example, "There was a decrease in sawmill production capacity of almost 60 percent" from 1989-2008. "Manufactured board processing decreased by about 30 percent, and there was

close to a 10 percent reduction in plywood and veneer processing. Pulp processing capacity remained about the same. Processing capacity is important for several reasons. It generates value added jobs and income in addition to those jobs associated with logging. Local processing capacity increases the net value of stumpage since it costs more to ship logs to distant mills. A higher stumpage value means projects are more likely to be economically viable." (Vol. 1) The effects analysis calculated changes in employment and labor income associated with timber harvest on the National Forests.

344. **Concern Statement:** The Forest Service should consider the social and economic impact of reduced grazing.

    Response: The Environmental Impact Statement estimates how the changes in permitted animal unit months (AUMs) would affect grazing-related employment and labor income. In particular, the analysis describes how: "Changes in forest management can affect traditions, lifestyles, and the economic livelihood of residents and communities. Those who depend on the national forests for their livelihoods and recreation opportunities are concerned that their relationship with the national forests may be compromised by other uses and restrictions. Forest Service managers depend on their relationships with local communities, people and their institutions to help administer the national forests by providing a skilled workforce, labor, manufacturing infrastructure, business support, and other services cost effectively. All of these relationships are important to sustaining and restoring the ecological integrity of the national forests as well as the social and economic conditions of the communities." (Vol. 1)

    Based on this and similar comments, interdisciplinary team members added more detailed descriptions of how changes in permitted animal unit months could affect local people's ability to practice long-held traditions as well as affect lifestyles and the livelihoods in local communities.

345. **Concern Statement:** The Forest Service should include mining in its discussion of economic and employment contributions.

    Response: The data indicate that mining accounts for less than ½ of 1 percent of employment in all three socio-economic impact zones. Mining is not a major use on any of the three National Forests. None of the alternatives would limit opportunities for future mining.

346. **Concern Statement:** The Forest Service should disclose the rationale and economic impact for requiring new or replaced stream crossings to accommodate 20 percent greater than 100-year flood events (RMA-RD-5).

    Response: The revised Forest Plan changed the label for this standard to RF-7 and updated the standard (RF-7S) as follows: "New or replaced permanent stream crossings shall be designed to allow for the 100-year flood and its bedload and debris. 100-year flood estimates will reflect the best available science regarding potential effects of climate change." The associated Blue Mountains Aquatic Restoration and Conservation strategy modified some standards and guidelines from the existing PACFISH/INFISH direction for MA 4B Riparian Management Areas. Revised standard RF-7 (and RF-8 and RF-9) help implement direction to incorporate climate change into decision-making, especially that pertaining to infrastructure (e.g., USDA Forest Service 2015, Executive Order-11988).

347. **Concern Statement:** The Forest Service should more fully address the diversity of public opinions on how national forests should be managed in its section on "Social and Economic Expectations".

    Response: The Final Environmental Impact Statement addresses the diversity of public opinions in a new section titled "Values, Attitudes, and Beliefs," which touches on a variety of public comments, including comments on access and wilderness.

Social and Economic: Balance with Ecological Analysis

348. **Concern Statement:** The Forest Service should not allow ecological considerations to trump social and economic considerations. Social and economic issues should be a top priority. The Forest Service should develop standards, guidelines and additional monitoring questions related to social and economic vitality. Social and economic values should be reflected in ecological goals and desired conditions.

    Response: The 1982 Planning Rule, and other laws, regulations, and policies direct the Forest Service to provide for multiple uses and a sustained yield of goods and services from National Forest System lands in a way that maximizes long-term net public benefits in an environmentally sound manner. The Federal Land Management Act of 1976 defines multiple use as "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people."

    The Environmental Impact Statement addresses the variety of national forest resources and uses that contribute to employment and income in communities surrounding the three National Forests. The social and economic environmental consequences section estimates employment and income related to recreation, livestock grazing, timber harvesting, Forest Service expenditures, and payments to counties under each alternative (Vol. 1). The Environmental Impact Statement analyzes a range of alternatives, which differ in their emphases on ecological protection and economic activity. The Environmental Impact Statement addresses the economic impact of each alternative and describes the effects in the context of each county in the socioeconomic impact zone (Vol. 1.). The Environmental Impact Statement describes a variety of human values related to biological, ecological, cultural, recreational, economic, and subsistence values, among others (Vol. 1). The Environmental Impact Statement assesses how the various alternatives would contribute to the values of the residents of the Blue Mountains socioeconomic impact zone (Vol. 1).

349. **Concern Statement:** The Forest Service should not promote ecological integrity (Goal 1) at the expense of promoting social well-being (Goal 2) and economic well-being (Goal 3).

    Response: The 1982 Planning Rule, and other laws, regulations, and policies direct the Forest Service to provide for multiple uses and a sustained yield of goods and service from National Forest System lands in a way that maximizes long-term net public benefits in an environmentally sound manner. The 1982 Planning Rule maximizes long-term net public benefits in an environmentally sound manner.

350. **Concern Statement:** The Forest Service should prioritize economics over ecology, and the effects of forest plan revision on local residents and communities should be the primary decision making criteria for selecting the chosen alternative.

Response: The 1982 Planning Rule, and other laws, regulations, and policies, direct the Forest Service to provide for multiple uses and a sustained yield of goods and service from National Forest System lands in a way that maximizes long-term net public benefits in an environmentally sound manner. The 1982 Planning Rule maximizes long-term net public benefits in an environmentally sound manner for local residents, communities, and regions. Prioritizing economics over ecology would go against law, regulation, and policy.

351. **Concern Statement:** The Forest Service should work to maintain social and economic conditions rather than just contribute to these values.

    Response: The Blue Mountains Forest Plans are consistent with law, regulation, and policy. Because the Forest Service is one of many factors (including both public and private sector factors) that influence social and economic conditions in the Blue Mountains region, it is beyond the capacity of the Forest Service *to maintain* social and economic conditions and values. Forest plan decisions do create the framework for a range of uses and products and services provided by the Blue Mountains national forests that *contribute to* the economic and social well-being of local communities, counties, and American Indian tribes (Vol. 1). In other words, it is possible for the Forest Service *to contribute to* social and economic well-being, but it is not possible for the Forest Service *to maintain* social and economic well-being.

Social and Economic: Coordination

352. **Concern Statement:** The Forest Service should improve its working relationship with people to benefit the forest.

    Response: The Blue Mountains forest plan revision planning team engaged in a series of public outreach activities, including public workshops between June and December of 2015, to understand the interests and concerns of communities near the three National Forests. The public workshops addressed the topics of access and wilderness, the pace and scale of restoration, and livestock grazing. As a result of these workshops, the interdisciplinary team developed two modified alternatives to address public concerns.

    Goal 3 of the Plans, Promote Economic Well-being, addresses a variety of national forest resources and uses that contribute to human well-being. The desired conditions in section 3.3, Goods and Services, emphasize the continued contribution of national forest management to private economic activity. The desired condition for 3.3.1, Forest Products, is for “a predictable supply of timber outputs, known as the allowable sale quantity, contributes to a local forest products industry.” The desired condition for 3.3.2, Livestock Grazing, is for “a predictable supply of livestock forage that contributes to local ranching operation sustainability.” The desired condition for 3.3.4, Mineral and Geological Resources, is that “exploration, development, and production of mineral and energy resources contribute to the social and economic needs of the nation, as well as local communities.” Opportunities to use national forest resources for economic development on the National Forests will only occur if private interest exists and market conditions allow individuals to take advantage of these opportunities.

Social and Economic: Desired Conditions

353. **Concern Statement:** The Forest Service should clarify how it determined desired conditions and should acknowledge that the plans do not meet the desired conditions of local residents.

Response: The desired conditions are based on best available scientific information, law, regulations, and policy, and the interests of the public and other stakeholders. Local residents' comments are one of many inputs in the decision-making process. Some local communities and stakeholders have different interests than others related to the management of national forests. The social analysis includes a "Values, Beliefs, and Attitudes" section that highlights these differences among the desires of local residents and communities. The Forest Plans, the Environmental Impact Statement, and the decisionmaker strive to balance the different desires among stakeholders and local communities. Based on public comments, the Final Environmental Impact Statement includes modified alternatives to better capture the range of public values.

The mission of the Forest Service is "To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." National forests are managed for the benefit of all Americans. The Blue Mountains Forest Plan is consistent with law, regulation, and policy, and addresses ecological, social, and economic consequences of forest management. The forest plan revision balances a broad spectrum of laws, regulations, and policies, including the Multiple-Use Sustained-Yield Act, which emphasizes a sustainable flow of benefits to communities, and the Endangered Species Act, which mandates protection of endangered species. Forest Service decisions balance the desires of local residents and communities with national goals and seek to provide the greatest good for the nation as a whole in the long run.

354. **Concern Statement:** The Forest Service should include county services and schools in its desired condition for community resilience and should acknowledge the importance of Forest Service management for these issues.

Response: The Plans identify community resilience as a desired condition. Local counties and communities that rely on the resources of the Blue Mountains national forests are resilient and adapt well to changing conditions (Forest Plan, Goal 2.9). For example, **t**he management of the Blue Mountains national forests contributes to outputs and opportunities that support county infrastructure. The national forests foster healthy and resilient communities by providing sustainable ecological services and products. In turn, communities use their infrastructure (which includes manufacturing facilities, local knowledge, skilled workers, and social networks/relationships) to support natural resource management and restoration activities.

While the Plans identify community resilience as a desired condition, the Forest Service cannot quantify the relationship between forest management and community resilience due to lack of data. In response to comments on community resilience, the Social Affected Environment section was updated with data that show trends in available social well-being in the Plan Area.

355. **Concern Statement:** The Forest Service should add an overarching desired condition for goods and services that focuses on providing meaningful, quantifiable and sustainable goods and services on annual basis.

Response: The Environmental Impact Statement provides a quantitative evaluation of a range of alternatives that are based on desired conditions in the Forest Plans. Desired conditions themselves are qualitative and not quantifiable elements of Forest Plans. Within the Goods and Services section of the Forest Plans, there are desired conditions for forest products, livestock grazing, special uses, mineral and geological resources, and water use.

356. **Concern Statement:** The Forest Service should include desired conditions for goods and services like clean water and recreation.

    Response: The Forest Plans contain direction for protecting soil, water, and air resources consistent with the Clean Water and Clean Air Acts. The information is located in the sections entitled: Water Use (section 3.3.5), Recreation (2.3), Community Resilience (2.11), and Scenery (2.1). All of the alternatives described in the Environmental Impact Statement are designed to provide adequate opportunities for motorized and nonmotorized recreation.

Social and Economic: Economic Well-being

357. **Concern Statement:** The Forest Service should revise Goal 3 (Promote Economic Well-being) to focus on the development of a strong relationship between the Forest Service and local communities, people, and institutions to help manage National Forests.

    Response: The Forest Service is working on developing stronger relationships with local communities and stakeholders. For example, local communities requested greater recognition of the important ties between social and economic well-being. The revised Forest Plans now recognize that social well-being is inextricably linked to economic well-being. In section 2.9 on Community Resilience, the Forest Plans state, "The Forests are important to the resiliency of local communities and Tribes because residents benefit from jobs and income produced from management activities, such as timber harvesting, livestock grazing, and mining. The Forests also provide the context and source for clean water and air, culturally significant foods relating to treaty-reserved rights, wildlife, recreation opportunities, and landscape settings that contribute to residents' quality of life and the character of local communities and Tribes." The Forest Plans identify goals for multiple forest resources and uses, including outdoor recreation (sections 2.2, 2.3, 2.4, 2.5, 2.7, 3.1, 3.3.3), range (section 3.3.2), timber (sections 2.9, 3.3.1), watershed (sections 1.1, 1.11, 3.3.5), and wildlife and fish (sections 1.2, 1.13, 2.3.1, 2.4, 2.6). As a result of public workshops and meetings with cooperating agencies, the interdisciplinary team developed two additional modified alternatives to address the public concerns.

    Goal 3, Promote Economic Well-being, addresses a variety of forest resources and uses that contribute to human well-being. The desired conditions in section 3.3, Goods and Services, emphasize the continued contribution of forest management to private economic activity. The desired condition for 3.3.1, Forest Products, is for "a predictable supply of timber outputs, known as the allowable sale quantity, contributes to a local forest products industry." The desired condition for 3.3.2, Livestock Grazing, is for "a predictable supply of livestock forage that contributes to local ranching operation sustainability." The desired condition for 3.3.4, Mineral and Geological Resources, is that "exploration, development, and production of mineral and energy resources contribute to the social and economic needs of the nation, as well as local communities." Opportunities to use national forest resources for economic development will only occur if private interest exist and markets conditions allow individuals to take advantage of these opportunities.

    The Environmental Impact Statement addresses the variety of national forest resources and uses that contribute to employment and income in communities surrounding the National Forests. The social and economic environmental consequences section estimates employment and income related to recreation, livestock grazing, timber harvesting, Forest Service expenditures, and payments to counties under each alternative

(Vol. 1). Additionally, the Environmental Impact Statement analyzes a range of alternatives, which differ in their emphases on ecological protection and economic activity. The Environmental Impact Statement addresses the economic impact of each alternative and describes the effects in the context of each county in the socioeconomic impact zone (Vol. 1). Additionally, the Environmental Impact Statement describes a variety of human values related to biological, ecological, cultural, recreational, economic, and subsistence values, among others (Vol. 1). The Environmental Impact Statement assesses how the various alternatives would contribute to the values of the residents of the Blue Mountains socio-economic impact zones (Vol. 1).

To further improve the Forest Service's relationship with local communities and stakeholders, the Blue Mountains revision planning team engaged in a series of public outreach activities, including public workshops between June and December of 2015, to understand the interests and concerns of communities near the Blue Mountains national forests. The public workshops addressed the topics of access and wilderness, the pace and scale of restoration, and livestock grazing.

358. **Concern Statement:** The Forest Service should not include "facilities and infrastructure" and "land ownership" in its goal of promoting economic well-being. The importance of tourism, access and recreation to local economies should be recognized.

    Response: Facilities, infrastructure, and land ownership are key to human interaction with National Forest System lands and, therefore, the provision of goods and services. For example, roads (infrastructure) enable access for logging, recreation, and grazing permittees. Additionally, the Environmental Impact Statement addresses the economic impact of multiple resource uses on National Forest System lands, including timber, recreation, and grazing (Vol. 1).

    In the decision-making process, the Forest Service strives to balance the different interests of stakeholders related to the management of National Forests, including economic interests associated with facilities, land ownership, and infrastructure. The social analysis includes a "Values, Beliefs, and Attitudes" section that highlights these differences among the desires of local residents and communities. The Forest Plans, Environmental Impact Statement and the decision-maker strive to balance the different desires among stakeholders and local communities. Based on public comments, the Final Environmental Impact Statement includes modified alternatives to better capture the range of public values.

359. **Concern Statement:** The Forest Service should not combine social and economic considerations in its management.

    Response: The social and economic considerations are enumerated separately in the Forest Plans. The revised, "Social and Economic Well-being" section of the Environmental Impact Statement analyzed some social and economic considerations separately. However, many social and economic considerations are inextricably linked together, therefore separating them is not appropriate. In addition, the Final Environmental Impact Statement addresses social conditions, including the diversity of public opinions. There is a section on "Values, Attitudes, and Beliefs" based on public comments in the Final Environmental Impact Statement.

    In the decision-making process, the Forest Service strives to balance the different interests of stakeholders related to the management of National Forests, including the relationship between social and economic concerns. While some commenters requested

that the social and economic concerns are separated, others requested that the social and economic concerns are linked. The "Values, Beliefs, and Attitudes" section highlights these differences among the desires of local residents and communities. The Forest Plans, Environmental Impact Statement and the decisionmaker strive to balance the different desires among stakeholders.

360. **Concern Statement:** The Forest Service should recognize the inextricable links between social well-being and economic well-being, for example through living-wage jobs, and should do a better job of demonstrating the link between ecological integrity and the social and economic components of the plan. The Forest Service should also recognize that the plan's desired conditions inhibit the ability of the Forest Service to promote social well-being and meet its multiple use mandate.

    Response: See the previous response to the comment above this one.

361. **Concern Statement:** The Forest Service should not be compelled to incorporate special management areas, especially those with limited motor or no vehicle use that conflict with social and economic well-being. These include MA2A Wild and Scenic River, MA2B Research Natural Areas and MA 2J Municipal Watersheds.

    Response: While the Forest Service recognizes that some stakeholders believe that the Agency should not be compelled to incorporate special management areas in the Plan Area, the Forest Service must balance access and resource protection according to law, regulation and policy. The Forest Service strives to meet user needs and accessibility guidelines. The Forest Service also recognizes that motorized access is an important component of forest management. In forest planning, the Agency balances a variety of resources affected by open roads and motorized use.

    The planning regulations (36 CFR 219.2, 1982) state: "The regulations in the subpart apply to the National Forest System, which includes special areas, such as wilderness, wild and scenic rivers, national recreation areas, and national trails." Special management areas are generally established either administratively or congressionally and are intended to conserve areas with unique characteristics, and that represent special attributes that compel additional management considerations outside of those prescribed for general forest settings.

    For research natural areas, the Forest Plan is designed to comply with planning regulations at 36 CFR 219.25 – Research natural areas (1982), "Forest planning shall provide for the establishment of research natural areas. Planning shall make provision for the identification of examples of important forest, shrubland, grassland, alpine, aquatic, and geologic types that have special or unique characteristics of scientific interest and importance and that are needed to complete the national network of research natural areas." Research natural areas are available for research, study, observation, monitoring, and educational activities, uses that typically are non-destructive and non-manipulative. Management Area 2B – Research Natural Areas, generally comprise less than one percent of the Planning Area and do not detract significantly from management activities associated with General Forest allocations: specifically, Management Area 2B comprises 0.6 percent of the Malheur National Forest, 0.8 percent of the Umatilla National Forest, and 0.5 percent of the Wallowa-Whitman National Forest.

    Similarly, Management Area 2A (Wild and Scenic River) comprises less than four percent of the Planning Area (Malheur is 0.7%, Umatilla is 3.2%, and Wallowa-Whitman is 3.0%). Motor vehicle use is considered a suitable use in river segments

classified as either scenic or recreational; river segments classified as wild generally overlap with designated Wilderness, where prohibitions provided in The Wilderness Act apply. While roughly three percent of MA 2A is rated unsuitable for motor vehicle use, the actual value is less given the consideration for river segments classified as scenic and recreational.

Management Area 2J (Municipal Watersheds) is an administrative determination, and in some cases is established by the Department of Agriculture. These areas generally comprise less than one percent of the Planning Area with the Malheur at 0.03%, and both the Umatilla and Wallowa-Whitman at 1.4%.

The combined management area allocations for Management Areas 2A, 2B, and 2J for the three National Forests is 3.8 percent, and does not detract significantly from management activities associated with General Forest allocations and general access across the National Forests. Activities proposed within or adjacent to these management areas would be evaluated through project level planning and comply with the National Environmental Policy Act including public involvement and participation.

362. **Concern Statement:** The Forest Service should not support economic well-being at the expense of conservation. The natural beauty and protected areas National Forests provide are important to the well-being of city dwellers and support recreational use and local economies.

Response: The Forest Service balances social, economic, and ecological well-being as well as the desires of local and non-local stakeholder groups. The projected consequences to well-being and the economy, along with the ecological consequences, are all given consideration by the decision-maker. The Environmental Impact Statement presents analysis for a range of alternatives.

Social and Economic: Grazing

363. **Concern Statement:** Grazing plays a key role in supporting the economies of local Blue Mountains communities and should not be reduced because of a “likely benefit” to aquatic species and their habitats. Grazing numbers could fall below those characterized in the plan because the proposed plan would make grazing less viable.

Response: Livestock grazing plays an important role in the economies of the Blue Mountain communities.

The Final Environmental Impact Statement evaluates a range of alternatives related to livestock grazing and addresses the economic impact of changes in livestock numbers on the three National Forests (Vol. 1). The Forest Plans propose some potential changes to grazing practices, but no reduction in livestock grazing is expected to result due to the standards and guidelines that are designed to protect fish and their habitat. Management actions under the preferred alternative would not reduce permitted livestock grazing relative to current conditions. Below are the estimated jobs supported by livestock grazing on the three National Forests.

Estimated jobs supported by livestock grazing on national forests, by alternative

National Forest	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E Mod	Alt. E Mod (Dep)
Malheur	426	435	204	432	426	426	460	460

National Forest	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E Mod	Alt. E Mod (Dep)
Umatilla	187	155	23	165	165	165	244	244
Wallowa-Whitman	282	264	112	292	274	274	379	379

Estimated labor income supported by livestock grazing on national forests, by alternative (thousands of dollars, 2014)

National Forest	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E Mod	Alt. E Mod (Dep)
Malheur	$7,690	$7,875	$3,851	$7,814	$7,690	$7,690	$8,296	$8,296
Umatilla	$2,653	$2,445	$301	$2,481	$2,481	$2,481	$3,453	$3,453
Wallowa-Whitman	$5,077	$4,820	$1,858	$5,262	$5,005	$5,005	$6,959	$6,959

Based on the values presented in the above tables, Alternative E-Modified presents the highest values for both estimated jobs and estimated labor income supported by livestock grazing compared to the other action alternatives, and is an increase compared to current values presented for Alternative A, the "No Action" alternative. The National Forest Management Act requires the Forest Service to address rangeland capability and suitability, but stocking decisions for specific grazing allotments are made through site-specific environmental analyses.

364. **Concern Statement:** The Forest Service should analyze the impact to local economies from reduced grazing to recover anadromous fish and bull trout restrictions and the difference in stream impact between the detrimental grazing levels of the past and current levels. The Forest Service should clearly state the relationship between animal unit months and economic effect.

Response: Livestock grazing plays an important role in the economies of the Blue Mountain communities.

The Final Environmental Impact Statement evaluates a range of alternatives related to livestock grazing and addresses the economic impact of changes in livestock numbers on the three National Forests (Vol. 1). The Forest Plans propose some potential changes to grazing practices, but no reduction in livestock grazing is expected to result due to the standards and guidelines that are designed to protect fish and their habitat. Management actions under the preferred alternative would not reduce permitted livestock grazing relative to current conditions. Below are the estimated jobs supported by livestock grazing on the three National Forests.

Estimated jobs supported by livestock grazing on national forests, by alternative

National Forest	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E Mod	Alt. E Mod (Dep)
Malheur	426	435	204	432	426	426	460	460
Umatilla	187	155	23	165	165	165	244	244

National Forest	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E Mod	Alt. E Mod (Dep)
Wallowa-Whitman	282	264	112	292	274	274	379	379

Estimated labor income supported by livestock grazing on national forests, by alternative (thousands of dollars, 2014)

National Forest	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. E Mod	Alt. E Mod (Dep)
Malheur	$7,690	$7,875	$3,851	$7,814	$7,690	$7,690	$8,296	$8,296
Umatilla	$2,653	$2,445	$301	$2,481	$2,481	$2,481	$3,453	$3,453
Wallowa-Whitman	$5,077	$4,820	$1,858	$5,262	$5,005	$5,005	$6,959	$6,959

Based on the values presented in the above tables, Alternative E-Modified presents the highest values for both estimated jobs and estimated labor income supported by livestock grazing compared to the other action alternatives, and is an increase compared to current values presented for Alternative A, the "No Action" alternative. The National Forest Management Act requires the Forest Service to address rangeland capability and suitability, but stocking decisions for specific grazing allotments are made through site-specific environmental analyses.

Concern Statement: The Forest Service should analyze the effect of both forest plan grazing restrictions and sage grouse amendments on local communities.

Response: The Final Environmental Impact Statement includes updated social and economic cumulative effects analysis, which addresses sage-grouse amendments.

Social and Economic: Manage for Social and Economic Benefits

365. **Concern Statement:** The Forest Service should make the desires of local communities the primary decision-making criteria for selecting an alternative and should develop an alternative that better reflects the desired conditions of local residents.

Response: The Blue Mountains forest plan revision planning team engaged in a series of public outreach activities, including public workshops between June and December of 2015, to understand the interests and concerns of communities near the Blue Mountains national forests. The public workshops addressed the topics of access and wilderness, the pace and scale of restoration, and livestock grazing. The Final Environmental Impact Statement has been updated to include two additional alternatives, Alternative E-Modified and Alternative E-Modified Departure. These alternatives were developed at public request to address the desires of local communities. They respond to concerns about the pace and scale of forest restoration as well as community well-being.

Local residents' comments are one of many inputs in the decision-making process. Some local communities and stakeholders have different interests than others related to the management of national forests. The social analysis includes a "Values, Beliefs, and Attitudes" section that highlights these differences among the desires of local residents and communities. The Forest Plans, Environmental Impact Statement, and the decision-maker strive to balance the different desires among stakeholders and local communities.

The mission of the Forest Service is "To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." National forests are managed for the benefit of all Americans. The Blue Mountains Forest Plans are consistent with law, regulation, and policy, and addresses ecological, social, and economic consequences of forest management. The forest plan revision balances a broad spectrum of laws, regulations, and policies, including the Multiple-Use Sustained-Yield Act, which emphasizes a sustainable flow of benefits to communities, and the Endangered Species Act, which mandates protection of endangered species. Law, regulation, and policy prevents the Forest Service from making the desires of local residents and communities the primary decision-making criterion.

366. **Concern Statement:** The Forest Service should increase the plan's focus on supporting social and economic well-being of local communities through grazing, logging, mining and access for recreation and subsistence needs. Managing for economic outputs would support rather than hinder healthy and vibrant rural communities, such as through timber payments to support county services. Logging levels to support local mill infrastructure and increased promotion of access for hunting and recreation would help provide community stability and support high quality local jobs.

    Response: The Final Environmental Impact Statement has been updated to include two additional alternatives, Alternative E-Modified and Alternative E-Modified Departure. These alternatives were developed at public request to address concerns about the pace and scale of forest restoration. The table below shows the total number of jobs attributable to timber volume sold, livestock grazing, and outdoor recreation on each national forest under each alternative considered in the Final Environmental Impact Statement.

Total direct, indirect, and induced employment contribution by national forest

National Forest	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. E-Modified	Alt. E-Modified Departure	Alt. F
Malheur	644	726	338	1,241	921	959	1,225	787
Umatilla	483	550	195	1,234	750	818	1,174	655
Wallowa-Whitman	520	596	268	1,323	923	1,043	1,342	715

The primary source of variation in the number of jobs across alternatives is the expected volume of timber sold. Alternative E-Modified and Alternative E-Modified Departure would increase the pace and scale of forest restoration relative to current management.

367. **Concern Statement:** The Forest Service should consider the socio-economic importance of increasing landscape fire resilience to protect recreational areas and other investments from wildfire. In addition, it should recognize that utilization of surface fuels would support economic development of the biofuels industry.

    Response: The planning team engaged in a series of public outreach activities, including public workshops between June and December of 2015, to understand the interests and concerns of communities near the three National Forests. The public workshops addressed the topics of access and wilderness, the pace and scale of restoration, and livestock grazing.

Based on public input and best available science, the Final Environmental Impact Statement includes a range of alternatives related to managing for fire resilience. The social and economic analysis evaluates the employment and labor income consequences of active restoration and the forest products produced by these treatments, including woody biomass (non-sawtimber, see Vol. 1). Small-diameter trees may be used in the development of a biofuels industry. The existing forest products industry infrastructure could be used in the development of a woody biomass industry. The Final Environmental Impact Statement captures the expected economic contribution of forest product harvesting on the National Forests.

368. **Concern Statement:** The Forest Service should address the Custom and Culture statements developed by Grant and Wallowa Counties.

    Response: The Forest Service recognizes a local belief in independence and self-sufficiency of land owners. The Final Environmental Impact Statement includes an expanded "Values, Beliefs, and Attitudes" section, which incorporates information from county officials and a variety of other stakeholders, including the custom and culture statements of Grant and Wallowa Counties.

369. **Concern Statement:** The Forest Service should not log forests as they contribute to quality of life and are valuable economic assets that provide water purification, flood control, slope stability, habitat, and other services.

    Response: The mission of the Forest Service is "To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." National Forests are managed for the benefit of all Americans. The Blue Mountains Forest Plans are consistent with law, regulation, and policy, and addresses ecological, social, and economic consequences of forest management. The Forest Plan revision balances a broad spectrum of laws, regulations, and policies, including the Multiple-Use Sustained-Yield Act, which emphasizes a sustainable flow of benefits to communities and the Endangered Species Act, which mandates protection of endangered species. Active restoration of the Blue Mountains national forests is an important part of improving forest resilience.

    We recognize that some stakeholders are opposed to any timber harvest activities on the National Forests, while other stakeholders urge additional timber harvesting on the National Forests. Local residents' comments are one of many inputs in the decision-making process. Some local communities and stakeholders have different interests than others related to the management of national forests. The social analysis includes a "Values, Beliefs, and Attitudes" section that highlights these differences among the desires of local residents and communities. The Forest Plans, Environmental Impact Statement and the decisionmaker strive to balance the different desires among stakeholders and local communities. Based on public comments, the Final Environmental Impact Statement includes two additional alternatives to better capture the range of public values.

370. **Concern Statement:** The Forest Service should provide an economic assessment of a recovered bighorn sheep population.

    Response: The Final Environmental Impact Statement addresses a range of alternatives that consider reducing the risk of disease transmission from domestic sheep to bighorn sheep. The Forest Service lacks the data necessary to conduct a quantitative economic impact analysis of bighorn sheep populations in the planning area. Changes in economic

activity due to changes in the bighorn sheep population are unknown. Furthermore, potential changes in the bighorn sheep population are unknown. Population goals for bighorn sheep are established by the Oregon Department of Fish and Wildlife.

Social and Economic: Mining

371. **Concern Statement:** The Forest Service should re-assess the local economic benefits of mining, including from small operations, in terms of jobs and money spent on fuel, food and other supplies. Such analysis should consider economic benefits and potential losses (from precluding mining) for road construction, building stone, and valuable minerals. The Forest Service should include mining on the list of jobs created on public lands.

    Response: None of the alternatives would limit opportunities for future mining. The economic section of the Final Environmental Impact Statement includes data on the current size of the mining sector in each of the three socio-economic impact zones and the Forest Service's contribution to employment and labor income in the mining sector (Vol. 1). The data indicate that mining accounts for less than ½ of 1 percent of employment in all three socioeconomic zones. Mining is not a major use on any of the three National Forests.

Social and Economic: Social Well-being

372. **Concern Statement:** The Forest Service should disclose how past management has affected community resilience in terms of lost jobs and poverty levels due to a lack of utilization of natural resources. In addition, it should support maintenance of permanent community infrastructure that provides living-wage jobs and use true attributes of community resilience rather than scenery and old forests, for instance. It should acknowledge that reductions in access, recreation opportunities, timber harvest and grazing negatively affect community resilience. Rather than limit these opportunities, the Forest Service should increase them.

    Response: The Final Environmental Impact Statement describes current conditions and trends related to community resilience, including both demographic characteristics and changes in natural resource utilization (e.g., changes in forest product removal and processing capacity). Additionally, the Final Environmental Impact Statement estimates how forest management actions contribute to employment and labor income in the areas that surround the National Forests (Vol. 1). The alternatives offer a range of natural resource utilization and Alternative E-Modified would increase timber volume sold relative to current management.

    The Forest Plans recognize the positive contributions to local communities to national forests. For example, Goal 3 of the Forest Plans recognizes "the interdependency between the Forest Service's need for forest management work and the degree to which local industries, infrastructure, employment (including youth), skilled workforce, and other factors provide for this need is important to sustaining and restoring the ecological integrity of the national forests and social and economic conditions of the communities…Recognizing mutual benefits of the relationships between local communities and the national forests is critical to understanding the contributions to the maintenance and enhancement of other desired conditions, such as healthy forests, clean water and air, scenery, cultural and historic resources, skilled workforce, and manufacturing infrastructure in the context of other local, regional, and national conditions."

The Environmental Impact Statement address the relationship between Forest Service management and local economies. "The quantity and quality of forest products and services provided by the national forests contribute to the local economy and the maintenance of local infrastructure. Infrastructure and the local workforce, in turn, play a critical role in the capacity of national forests to conduct forest management activities. The mix of uses, products, and services the Forest Service expects to provide over time will be stated in the forest plans" (Vol. 1). Many comments requested that the Environmental Impact Statement recognize the economic importance of public lands to local economies. The Environmental Impact Statement includes an economic impact analysis of forest outputs to the three socio-economic impact zones. The economic analysis uses the finest geographic scale possible, functional economic areas containing multiple counties, using standard methodologies. The Final Environmental Impact Statement includes a revised and expanded social and economic cumulative effects analysis (Vol. 1).

373. **Concern Statement:** The Forest Service should include subsistence needs as an attribute of social well-being and community resilience. Such needs include access for firewood and other resources. A more comprehensive list of services provided by the ecosystems should be included (for example as a table), which could be clearly linked to benefits for local residents.

    Response: The social values section of the final EIS addresses the relationship between subsistence and well-being (Vol 1). The final EIS includes more detail on subsistence needs, access for firewood, and other resources in the social and economic section.

374. **Concern Statement:** The Forest Service should not include old forest and old trees as a social well-being issue.

    Response: As the management direction and plan components relating to old forest are primarily driven by its ecological importance, this section has been placed under the goal of "Promoting Ecological Integrity" within the Forest Plans. As described in the "Values, Attitudes, and Beliefs" portion of the Final Environmental Impact Statement, stakeholders have a variety of views and preferences related to old forest management. The alternatives adopt a range of management actions to address forest health. We acknowledge that a wide spectrum of social and ecological values are associated with old forests. Old forests are some of the most ecologically and socially valuable successional stages in the Pacific Northwest. Old forests of the Blue Mountains are expected to provide myriad benefits to humans. Various groups find old forests aesthetically pleasing, culturally significant, ecologically important, economically valuable as a sustainable timber resource, and necessary for a landscape that is healthy and resilient to natural disturbances.

Social and Economic: Timber

375. **Concern Statement:** The Forest Service should provide a predictable flow of timber to support mills, loggers, truckers, other local jobs, county government and public services. Better support of logging and milling infrastructure will help retain the capacity needed to restore national forest lands. The Forest Service should provide incentives to foster development of new forest-related industry and should support more mill competition.

    Response: The Final Environmental Impact Statement has been updated to include two additional alternatives. These alternatives were developed at public request to address concerns about the pace and scale of forest restoration. Alternative E-Modified would

support increased timber sale volumes relative to current management while also providing a predictable (non-declining) flow of timber.

The analysis shows that most of the counties in the Blue Mountains Forest Plan Revision socio-economic impact zones have medium high to high dependence on timber and relatively low socio-economic resiliency (Vol. 1). The analysis also notes that natural disturbances and market conditions, largely outside the control of Forest Service management, can affect the flow of timber from the national forests (Vol. 1). The alternatives analyzed in the Environmental Impact Statement provide a range of predicted timber outputs, with Alternative D offering the most volume and Alternative C the least (Vol. 1). The range of alternatives enables a comparison of the socio-economic consequences of timber management on the Blue Mountains national forests. The Environmental Impact Statement discloses the expected timber-related employment and labor income contributions from management under each alternative (Vol. 1). The economic impacts of timber harvested from National Forest System lands are analyzed in the context of timber dependency and low socioeconomic resiliency. The analysis notes under which alternatives timber output may be adequate to support existing wood manufacturing infrastructure (Vol. 1).

376. **Concern Statement:** The Forest Service should support increased timber harvest that has been made possible through the collaborative process and should meet its commitment of providing 75 MMBF for the 10-year stewardship contract.

    Response: The Final Environmental Impact Statement has been updated to include two additional alternatives. These alternatives were developed at public request to address concerns about the pace and scale of forest restoration. Alternative E-Modified would support increased timber sale volumes relative to current management.

377. **Concern Statement:** The Forest Service should not state that levels of timber harvest and resulting employment under alternatives D and E may be enough to support and possibly expand wood manufacturing infrastructure and that many people in the timber industry are adapting their skills and infrastructure to support a restoration-based economy.

    Response: The social and economic environmental consequences analysis has been revised in the Final Environmental Impact Statement. The analysis notes that Alternative D, Alternative E-Modified, and Alternative E-Modified Departure would increase timber volume sold and timber-related employment and labor income in the socio-economic impact zones. However, the analysis no longer states that wood manufacturing infrastructure may be expanded due to Forest Service management actions.

Social and Economic: Tribal Economics

378. **Concern Statement:** The Forest Service should incorporate the Tribe’s role and contribution to the economy of the Blue Mountains National Forests.

    Response: Forest plan decisions create the framework for the range of uses and products and services provided by the Blue Mountains national forests that contribute to the economic and social well-being of local communities, counties, and American Indian Tribes (Vol 1). While we recognize the Tribe’s role and contribution to the economy of the Blue Mountain National Forests, the Environmental Impact Statement does not enumerate these roles and contributions because the Blue Mountain Forest Plan does not affect the contributions.

Social and Economic: Vision

379. **Concern Statement:** The Forest Service should represent social and economic expectations and issues in a positive light and should recognize that local residents rely greatly on "recreational" use of public lands to fulfill social and economic needs.

    Response: The Forest Plans recognize the positive contributions of local communities to national forests. For example, Goal 3 of the Forest Plan recognizes "the interdependency between the Forest Service's need for forest management work and the degree to which local industries, infrastructure, employment (including youth), skilled workforce, and other factors provide for this need is important to sustaining and restoring the ecological integrity of the national forests and social and economic conditions of the communities…Recognizing mutual benefits of the relationships between local communities and the national forests is critical to understanding the contributions to the maintenance and enhancement of other desired conditions, such as healthy forests, clean water and air, scenery, cultural and historic resources, skilled workforce, and manufacturing infrastructure in the context of other local, regional, and national conditions."

    The Final Environmental Impact Statement includes a "Values, Attitudes, and Beliefs" section, which aims to capture the diverse views of local community members and other stakeholders regarding national forest management. This section addresses values, beliefs, and attitudes related to access, economic and social well-being, livestock grazing, old forests, recommended additions to the National Wilderness Preservation System, and ecological resilience. The Final Environmental Impact Statement considers a range of alternatives, all of which will continue to provide plentiful recreation opportunities on the Blue Mountains national forests.

380. **Concern Statement:** The Forest Service should manage the national forests for the benefit of the people.

    Response: The mission of the Forest Service is "To sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." National forests are managed for the benefit of all Americans.

    As stated in the Forest Plans, the Forest Service balances a variety of public interests as well as law, regulation, and policy. The Forest Plans describe the challenges of this balance in the "Vision" section, noting that "Public land management inevitably involves conflicting public desires, values, and preferences. The public expects a diversity of uses from National Forest System lands. People frequently disagree about how the national forests should be managed. Interests and opinions are often held strongly, which can lead to a decision-making process characterized by conflict and controversy. This increases the complexity of national forest management."

Social and Economic: Wilderness

381. **Concern Statement:** The Forest Service should protect wildlands, including roadless areas and wild rivers, due to economic, social, and ecological reasons, particularly to provide important recreation opportunities.

    Response: The Environmental Impact Statement provides a range of alternatives, including two alternatives with no preliminary administratively recommended wilderness (Alternatives A and D) and one that recommends more than half a million additional acres of wilderness (Alternative C). The economic impact analysis show the

economic consequences of wilderness designation (Vol. 1). Alternative C has the highest shares of preliminary administratively recommended wilderness areas across the three National Forests. As a result of increased wilderness and other management actions under Alternative C, this alternative would support lower levels of employment and labor income in forest resource extraction (timber and grazing). The effect of preliminary administratively recommended wilderness on ecological integrity is addressed in resource analyses throughout the Environmental Impact Statement.

In the decision-making process, the Forest Service strives to balance the different interests of stakeholders related to the management of national forests, including preliminary administratively recommended wilderness areas. While some commenters requested more recommended wilderness, others requested that the Forest Service consider no recommended wilderness. The updated analysis includes a "Values, Beliefs, and Attitudes" section that highlights these differences among the desires of local residents and communities. The Forest Plans, Environmental Impact Statement and the decision-maker strive to balance the different desires among stakeholders.

382. **Concern Statement:** The Forest Service should limit wilderness because it has negative economic impacts, in several ways: (1) minimizes the number of natural resource-related jobs, (2) loss of income from motorized users, and (3) loss of county tax revenues. An economic analysis for proposed wilderness must be part of the environmental, economic and social well-being analysis.

    Response: The Environmental Impact Statement provides a range of alternatives, including two alternatives with no preliminary administratively recommended wilderness (Alternatives A and D) and one that recommends more than half a million additional acres of wilderness (Alternative C). The economic impact analysis show the economic consequences of wilderness designation (Vol. 1). Alternative C has the highest shares of preliminary administratively recommended wilderness areas across the three National Forests. As a result of increased wilderness and other management actions under Alternative C, this alternative would support lower levels of employment and labor income in forest resource extraction (such as timber and grazing).

    In the decision-making process, the Forest Service strives to balance the different interests of stakeholders related to the management of national forests, including preliminary administratively recommended wilderness areas. While some commenters requested more recommended wilderness, others requested that the Forest Service consider no additional wilderness. The updated analysis includes a "Values, Beliefs, and Attitudes" section that highlights these differences among the desires of local residents and communities. The Forest Plans, Environmental Impact Statement and the decision-maker strive to balance the different desires among stakeholders.

Soil

Soil: Productivity and Health

383. **Concern Statement:** The Forest Service should clarify where soils currently vary from desired soil conditions and how soils will be monitored to determine if the desired condition is met. The Forest Service should establish a soil quality index for the Blue Mountains to support measurement of soil health and damage.

Response: A forest plans is a programmatic level document and as such does not include site-specific or decision determinations. When projects are proposed at a site-specific level, supporting documents will be provided to accompany proposed recommendations in the associated environmental analysis before a determination can be made (i.e., a soils map with descriptions of the soil types, soil survey data, and data or literature to support assumptions and conclusions, along with records of how vegetation has moved toward desired conditions (or not) over time).

The reasons for why desired conditions may not be met are typically associated with high levels of disturbance. Roads, timber harvest, developed and undeveloped recreation, and animal grazing (both managed and unmanaged) are common causes of disturbance. This is not to say all disturbance is detrimental, since the soil has some level of inherent resilience. However, the greater the disturbance, the more opportunity for detrimental conditions to arise.

Monitoring to determine a change from desired condition is in place and will continue in the form of best management practices monitoring (throughout various forest practices), after-action activity assessments, and environmental analysis of existing and estimated detrimental soil conditions.

384. **Concern Statement:** The Forest Service should include a discussion of landslides as well as goals, objectives, and standards and guidelines to manage landslide-prone areas.

Response: Information about detrimental soil mass wasting has been added to the Final Environmental Impact Statement, Physical Environment, in the "Soils" section. When areas of instability are identified, these areas are assessed and a site determination made. Project-level site determinations will then include a determination of extra evaluation to minimize additional disturbance (including, but not limited to, the possibility of mitigation measures), or avoidance.

385. **Concern Statement:** Highly productive soils should be managed for a higher degree of soil quality to protect long-term productivity, and volcanic soils should be managed more protectively because they are difficult to restore once damaged. Management and monitoring should reflect microclimate variability and the 80 different land type associations in the Blue Mountains region. In addition, the Forest Service should aim for better than minimum soil productivity standards to create a buffer against impacts.

Response: For the purposes of the plan revision, the Blue Mountains Landtype Association was used to analyze the soil resource for a variety of factors: soil productivity, site suitability, detrimental conditions and soil development. The Landtype Association was used due to its continuous coverage across the analysis area and a logical generalization of the complex landscapes in the Blue Mountains. For ground-disturbing projects planning and implementation, a finer level of soil survey has been done on two of the National Forests, and is being completed on the third. The Blue Mountains Terrestrial Ecosystem Unit Inventory has been completed and certified by the Natural Resources Conservation Service for the Wallowa-Whitman National Forest. The Wallowa-Whitman National Forest portion of the Terrestrial Ecosystem Unit Inventory has the recognition of the largest map legend in terms of map unit numbers, for any soil survey in the Natural Resources Conservation Service system. This level of detail allows a high degree of information for planning and implementation of projects and this information is also comparable with private land Natural Resources Conservation Service county surveys. The Umatilla National Forest has been mapped to the same standard and is currently being correlated for certification. Additionally the Malheur

National Forest is actively being mapped. In the absence of Terrestrial Ecosystem Unit Inventory mapping, finer detail soils information is available in the form of the Soil Resource Inventory.

Additionally, the Plans will be including monitoring on Mollisols under certain conditions to begin documenting that desired conditions are being sustained or exceeded, such that adaptive management can be implemented in the event they are not.

386. **Concern Statement:** The Forest Service should recognize that subsoiling leaves the landscape vulnerable to erosion and invasive weeds.

Response: Soil compaction and displacement are often considered cumulative effects following managed activities that can result in detrimental soil conditions across the landscape, although they can also follow natural events. These conditions open up affected areas both directly and indirectly to more vulnerability for additional erosion and for the establishment of invasive weeds, as well as factors that prohibit desired plant growth and development. These combined factors over time may serve to reduce the volume of a forest stand by reducing overall height and diameter of trees, especially on productive soils.

Typically, if soil compaction prevents moisture infiltration into the compacted soil, relief from freeze/thaw conditions does not occur, leaving the site either in detrimental conditions or with subsoiling as a needed mitigation option to move the site toward desired conditions. Use of effective ground cover (another mitigation option) in concert with subsoiling can minimize most risk of compaction recurring from subsidence or rain-induced soil sealing (potential anticipated effects from subsoiling). Straw waddles, water bars, or other appropriate recommendations can also be made to minimize impacts caused by erosion. Recommending keeping tires cleaned during construction and seeding from areas with invasive species, using weed-free seed, and applications for two seasons following seeding with approved herbicide treatment to target specified invasive species are examples of mitigations for invasive weeds.

Soil: Wildfire and Prescribed Fire

387. **Concern Statement:** The Forest Service should reconsider its post-fire seeding strategy as seeding can be ineffective. Nonnative plant seeding following disturbance should be allowed to protect soil stability.

Response: A common concern following a wildfire is soil stability. There may be a specific case or conditions that could warrant seeding, but typically it is not justified for slope stabilization. Environmental conditions within the Blue Mountains are such that seeding for soil stabilization has a very small window of opportunity before the first damaging storm. It is likely that most “seeding has a low probability of reducing erosion the first wet season after a fire” (Robichaud, Beyers and Neary 2000) since fires in the area are typically controlled (late summer/early fall) and the duration of seedling emergence to effective ground cover is highly variable. Couple that with the amount of growing season left before the first damaging storm (mid to late fall) and vegetative growth that might be effective as a ground cover has a very small window of opportunity, making for a low likelihood of stabilization from a seeding project. Furthermore, within the Blue Mountains, erosion modeling (supported by monitoring) has shown that the likelihood of elevated erosion risk may be low depending upon the site modeled. In many cases, utilization of seeding following a wildfire disturbance for the purposes of slope stabilization is not justified. The mention and use of the

Robichaud, Beyers and Neary 2000 citation have been added between the Draft and Final Environmental Impact Statements.

388. **Concern Statement:** The Forest Service should account for soil impacts from fire suppression and prescribed fire.

    Response: Prescribed fire is tracked in the FACTs database quantitatively for acres and geographic area affected. This information can be assessed against the variety of soil types where prescribed fire has taken place.

    As a point of clarification, an assessment of less than 80 percent soil productivity (or more than 20 percent detrimental soil conditions) within an activity area, does not prevent a proposed activity from occurring. If an activity area has less than 80 percent productive soil conditions, then the project should include restorative actions to bring the site above the 80 percent productive soil conditions. If the activity area, with the combination of existing detrimental soil conditions and proposed activity detrimental soil conditions estimates, falls below the 80 percent sustainable soil productivity, then restorative actions should return the site to above 80 percent sustainable productivity. These limits have been included within the standards and guidelines.

Water Quality

Water Quality: Pollutants

389. **Concern Statement:** The Forest Service should deter water pollution from nonpoint sources, primarily bacterial contamination from livestock grazing, and avoid herbicide use, to meet the water quality requirements of the Clean Water Act and the National Forest Management Act.

    Response: Livestock grazing is one of several factors contributing, or that have contributed, to the identification of streams on the National Forests as water quality limited. As of 2004, no stream within the three National Forests was listed for bacterial or chemical contamination, though there were 1,237 stream miles 303(d) listed for other reasons. In 2012, the most recent year reported, 40 stream miles on the three National Forests were 303(d) listed for *E. coli* or bacterial pollution (0.14 percent of all streams), 237 stream miles were listed for elevated stream temperature (0.83 percent of all streams) and 146 stream miles were listed for sedimentation (0.5 percent of all streams). A total of 1,226 stream miles (4 percent) were 303(d) listed in 2012. In addition, as of 2012, 1,557 stream miles on the National Forests were considered water quality limited, with total maximum daily load) approved (Category 4A), and 460 stream miles were considered water quality limited with total maximum daily load needed (Category 4B) for a total of 3,240 miles of water quality limited streams (11.4 percent). Requirements of the Clean Water Act will be met when all identified actions needed in order to meet state water quality criteria have been met and these streams are no longer considered water quality limited.

Water Quality: Sediment

390. **Concern Statement:** The Forest Service should not blame road construction for long-term sediment delivery and should acknowledge that road obliteration leads to sediment issues. Baseline conditions and historic norms for “clean and cold” water should be provided.

Response: Sediment production from roads declines following initial construction, but the majority of sediment produced from forest roads is from unsurfaced roads. Sediment increases proportionally with the level of traffic, and is most strongly related to the approaches to stream crossings and to the outlets of cross drain culverts that deliver water and sediment from inboard ditches. Road-related erosion has been documented to be as much as 200 times higher than the rest of the watershed, meaning that ½ of 1 percent of watershed area in roads can double the erosion rate in some cases. In any case, road surface erosion accounts for the majority of sediment delivered to streams in most forested watersheds, and the effects have been extensively documented. Roads intercept and reroute subsurface flow and increase the rate of watershed runoff. When water diverted from roads is concentrated, as at the outlet of cross drain culverts, it may result in gully formation downslope of the road (Wemple 1994, Wemple 1998) and has been documented to carry sediment derived from road surfaces more than 600 feet.

The purpose of decompacting road surfaces is to allow vegetation to become established and this ultimately reduces surface erosion rates relatively quickly.

391. **Concern Statement:** The Forest Service should explain its protocols for sedimentation estimates, especially for the Umatilla National Forest's Wall Creek watershed. Some protocols can produce errors regarding how particles are dispersed across a stream substrate.

    Response: The methods used in the Wall Creek study are available at: https://www.fs.fed.us/GRAIP/manuals.shtml. Office and field procedures are described in Cissell et al. (2012) and Black et al. (2012).

392. **Concern Statement:** The Forest Service should install water-bars and implement other road management techniques, including out-sloping and sediment traps, to minimize sediment flow into streams.

    Response: This is the intent described in the Draft Environmental Impact Statement and clarified in the Final Environmental Impact Statement.

Water Quality: Stream Temperatures

393. **Concern Statement:** The Forest Service should reduce permitted uses on agency lands in order to minimize disturbance and improve water quality regarding stream temperature under the Clean Water Act. Altered stream temperatures can impact at-risk fish species.

    Response: Any determination of present condition should be based, not just on current or recent land use, but on the sequence of events and magnitude of past events that have led to existing conditions. As described in the watershed analysis of the Final Environmental Impact Statement, the alteration of streams and riparian areas began more than a century ago, and in several cases began before the national forests were established.

    Using the upper Grande Ronde River as an example, an estimated 11 to 13 million tons of sediment have eroded from stream channels and floodplains upstream of La Grande. The Grande Ronde River does not have the transport capacity to move this much sediment in any single flood, but is capable of having transported this much sediment in response to the multiple floods that have occurred since records began in 1904. The initial impacts to the Grande Ronde River were placer mining beginning in the 1860s, construction of the State Ditch in 1870, use of the river for log drives as early as 1874,

splash dams and log drives from 1889 through 1919, and overgrazing by livestock that led to the recognition of poor range conditions by the 1880s. In response to these actions, channel and floodplain erosion was likely well underway by the time logging activity and road construction were greatly increased on National Forest System lands between 1950 and 1995. Livestock numbers in the upper Grande Ronde River were reduced from 211,000 animal unit months to 51,000 between 1911 and 1990 (McIntosh 1992), a decline of 78 percent. Since 1990, livestock use has been further reduced to just over 18,000 animal unit months, a reduction of 64 percent from 1990, and representing a 92 percent decrease from 1911 levels. Existing road miles have been reduced by roughly 10 percent and open road density has been reduced by roughly 50 percent since 1990. As indicated by these changes, management activities have already been reduced.

Stream temperature is affected by shade, groundwater inflow, channel morphology (channel width and depth in particular), the quantity and velocity of stream flow, the amount of water removed from channels by flow diversion, and other factors, all of which need to be considered in conjunction with the magnitude and sequence of past disturbance. Some form of channel and floodplain alteration has occurred in every river basin in the Blue Mountains. In most, if not all cases, this has led to differing degrees of channel incision, followed by channel widening as rivers adjust to accommodate the full range of flows (Leopold et al. 1964). The path forward from here has to include a recognition of the magnitude and sequence of past impacts, with an understanding of the degree to which *present* land use is compatible with the achievement of desired conditions.

Watershed

Watershed: Assessments

394. **Concern Statement:** The Forest Service should analyze effects from land management activities, including grazing, logging, and recreation, on the watershed's peak and base flows, hyporheic zones, groundwater function, stream downcutting, wetlands, seeps and springs. Activities should be disallowed in riparian areas and in watersheds where streams are listed on the Clean Water Act's 303(d) list.

    Response: A discussion of the effects of timber harvest, grazing, and roads on watersheds was included in the Draft Environmental Impact Statement and is expanded in the Final Environmental Impact Statement to include descriptions of streamflow characteristics in the Blue Mountains and the effects of land use on streamflow.

    The Clean Water Act distinguishes between point sources and non-point sources of pollution. Point sources are regulated by National Pollutant Discharge Elimination System permits which limit the amount of a pollutant allowed to enter a given waterbody, and under which activities that exceed the allowed pollutant limit may be disallowed. Activities on the national forests are generally treated as non-point sources of pollution. Existing laws do not require disallowing activities in watersheds with 303(d) listed streams. Rather, the Clean Water Act specifies the completion of total maximum daily loads by the States that identify measures needed to restore water quality to levels that meet the specified water quality criteria. By agreement with the Oregon Department of Environmental Quality, the national forests in Oregon prepare Water Quality Restoration Plans for affected watersheds within the national forests, once

total maximum daily loads are completed, that identify watershed-specific actions needed to restore water quality.

In addition, the Forest Plans include a standard, RMA-1S, which requires forests to adjust management practices in areas where desired conditions have not been met and existing management contributes to those conditions.

The analysis in the Draft Environmental Impact Statement suggested that watershed conditions are likely to be improved under all of the alternatives but that the rate varies in each alternative. The analysis in the Final Environmental Impact Statement makes a similar finding, but based on revised vegetation data the improvements are not as strong as described in the Draft.

395. **Concern Statement:** The Forest Service should explain at what point a watershed is considered restored and what tools are used in restoration, ideally detailed in a chart format by key watershed. More specifically, how does the Forest Service develop improved subwatershed assumptions for a 10-year period for each alternative and each national forest, as presented in Table 115 (Volume 1 of Draft Environmental Impact Statement).

Response: The watershed analysis in the Draft Environmental Impact Statement assessed watershed conditions based on available data on road density, vegetation condition, livestock use, and channel and aquatic habitat conditions. Roads, vegetation, and livestock use were used to describe hillslope conditions; riparian livestock use, and available stream survey data were used to evaluate channel and riparian conditions. Analysis methods were included in Appendix B of the Draft Environmental Impact Statement and are incorporated into the analysis in the Final Environmental Impact Statement.

As described in the Draft Environmental Impact Statement, computed model scores based on these attributes range between +1 and -1. Scores above +0.33 are assumed to represent good conditions, scores between +0.33 and -0.33 are assumed to represent fair conditions, and scores less than -0.33 represent poor conditions. Scores in each range are grouped into condition classes 1, 2, and 3 and displayed in the Draft and Final Environmental Impact Statements. The analysis in the Final Environmental Impact Statement follows the same steps, but also displays the average difference in computed scores for all watersheds, key watersheds, and priority watersheds. The Draft reported the number of watersheds improved as the sum of watersheds that are expected to change from Class 2 to 1 and Class 3 to 2 during the life of the plan. The analysis in the Final follows the same steps. Condition classes, as used in the Draft and Final Environmental Impact Statements, are intended to be analogous to properly functioning, functioning at risk, and impaired as used in the Watershed Condition Framework (USDA-FS 2011).

The analysis used to select key and priority watersheds is based on an analysis of watershed, riparian, and habitat conditions of all watersheds within the national forests following methods described in Reiss et al. (2008) and is described in the 2018 Blue Mountains Aquatic and Riparian Conservation Strategy included as an appendix to the individual Forest Plans.

The analysis used in the Draft and Final Environmental Impact Statements is a broad-scale assessment of watershed, stream channel, riparian, and aquatic habitat conditions. Identification of specific restoration measures for individual watersheds will be

identified by the forests during plan implementation and is outside the scope of the Final Environmental Impact Statement and Forest Plans. Objectives in the plan describe the types of actions needed to move different resources towards desired conditions. The forests will identify specific actions in Water Quality Restoration Plans and Watershed Restoration Action Plans and will implement those actions following the appropriate environmental analysis.

396. **Concern Statement:** The Forest Service should acknowledge that restoration of watersheds, including aquatic habitat function, have not proven effective or cost efficient.

    Response: Methods of stream, riparian, and watershed restoration have evolved over time. The failure of some methods of stream restoration in the Pacific Northwest and the cost of restoration efforts is recognized by Federal Agencies, environmental groups, and organizations with interest in stream, riparian, wetland, and watershed restoration.

    Some of the failures have been recognized in published papers by Elmore and Beschta (1989), House and Boehne (1996), and Roper et al. (1997, 1998), among others. There are many others. The development of monitoring plans to evaluate the effectiveness of different restoration techniques, sharing of information on methods and both successes and failures have all been suggested as ways to improve the methods used in stream and improve the effectiveness of restoration measures in general.

    The cost of restoration is often used as an argument for avoiding the impacts that would result in the need for restoration. The watershed analysis in the Final Environmental Impact Statement points out that stream and watershed degradation can often be traced to a response to impacts that occurred a century ago or earlier. Understanding the processes active in individual watersheds, how streams respond to disturbance, and the present state of streams and riparian areas with respect to past and ongoing disturbance are all necessary to the success of any restoration plan. Many restoration projects have failed to achieve desired results because of failure to recognize watershed, stream channel, or sediment transport dynamics. One example is the placement of log weirs in Camp Creek on the Malheur National Forest, a practice that was implemented on rivers throughout the western United States. The failure of the method is widely known and is no longer in practice.

    Watershed, stream, aquatic, and riparian habitat restoration are evolving fields in which it is recognized that not all past attempts have been successful at achieving the desired outcomes. The Forest Service is committed to improving stream and watershed conditions with the goal of attaining fully functioning watersheds, as evidenced by implementation of the Watershed Condition Framework (USDA-FS, 2011) and the agency's continued cooperation with multiple State, Tribal, Federal, and other partners to implement habitat improvements and improve watershed conditions. Forest Service policy is to use the best available science, recognizing that science also evolves with time, and that new information is made available on a nearly continuous basis. Future watershed and habitat restoration will continue to be guided by watershed analysis based on the best available science, the development of watershed restoration action plans, and will be implemented following the appropriate environmental analysis.

Watershed: Key and Priority Watersheds

397. **Concern Statement:** The Forest Service should more clearly define key vs. priority watersheds, including their mapped locations and assigned management areas, and

explain how their designations will affect day-to-day use. Key watershed designation should be scientifically defensible. The Forest Service should not designate key watersheds without first going through the NEPA (environmental analysis) process. Some comments suggested the presence of salmonids in a stream during a portion of their life history should not merit a key watershed designation.

Response: The rationale for key watersheds was described in the Proposed Forest Plan in the "Watershed" and "Management Focus" sections. Methods used to select key watersheds were included in Appendix B of the Draft Environmental Impact Statement along with a table listing the key watersheds identified for each National Forest. A map and table of key watersheds, including the key watersheds identified as priorities for restoration are included in the 2018 Blue Mountains ARCS (Appendix A of the Forest Plan). The process leading to the development of the Draft and Final Environmental Impact Statements represents the environmental analysis process for the selection of key watersheds for the national forests of the Blue Mountains.

In general, the desired conditions, standards, and guidelines in the Forest Plans apply to all watersheds. Three desired conditions and three standards apply to key watersheds and watersheds containing critical habitat for federally listed fish species and can be found in the Forest Plans and 2018 Blue Mountains ARCS (Appendix A of each Plan).

398. **Concern Statement:** The Forest Service should explain its method to rate watersheds, including aquatic and riparian management prioritization.

Response: The rationale for key watersheds and the direction to include them in the Forest Plans was provided in the 2008 Aquatic Riparian Conservation Strategy (USDA Forest Service 2008) and in the 2018 Blue Mountains ARCS (Appendix A) included with the Forest Plans. As described in the Draft Environmental Impact Statement, the methods for identification of key watersheds are described in Reiss et al. (2008); the specific process used to identify key watersheds for the Malheur, Umatilla, and Wallowa-Whitman national forests was adapted from Reiss et al. (2008) and described in the 2018 ARCS (Appendix A) in each Forest Plan.

399. **Concern Statement:** The Forest Service should not designate subwatersheds as key that do not meet the requirements of a key watershed.

Response: This does not match our assessment. Watersheds were selected as key watersheds on the basis of watershed conditions, the population status of four selected focal species (chinook salmon, steelhead, bull trout and inland redband trout), and restoration potential in the judgement of forest fish biologists and hydrologists on the three National Forests. Based on our analysis, in nearly all cases, watersheds selected as key watersheds contain the best remaining habitat in any given subbasin. The occurrence of 303(d) listed streams is not by itself a criterion for exclusion as a key watershed, but is one of the criteria used in determining restoration needs.

400. **Concern Statement:** The Forest Service should remove standard KW-1 that seeks no net increase in road mileage in any key watershed. The standard implies that roads will be decommissioned, which should not occur through this plan. In addition, KW-2 (requiring in-stream flows and maintenance of habitat when developing hydroelectric or surface water opportunities) and KW-3 (prohibiting new water developments in key watersheds) should be dropped because they detract from multiple-use opportunities.

Response: The standard has been reworded for the preferred alternative. Road density reached a maximum soon after the 1990 Plans were implemented and construction of

new roads has been rare in recent years in any watershed, not just in key watersheds. More often, roads are reconstructed following storm or other damage. Reconstructed roads may be realigned and are designed to have less of an effect on aquatic and riparian habitats than the existing road. Standard KW-1 is a product of Endangered Species Act consultation on the 1990 Plans as amended by PACFISH and INFISH, and was given to the Forest Service as a mandatory term and condition for key and priority watersheds, in Forest Plan Biological Opinions in 1995 and 1998 from National Marine Fisheries Service and U.S. Fish and Wildlife Service for Snake River Basin Chinook and Steelhead and for Columbia River bull trout. We have implemented those terms and conditions to the extent our authorities and multiple-use land management obligations permit, since 1995. The Endangered Species Act requires that Federal agencies use their authorities to help achieve recovery for federally listed species and we have done that as opportunity, funding and other legal obligations allowed.

It is possible that we would not receive this requirement as a mandatory term and condition of a Biological Opinion on the revised Forest Plans if we did not voluntarily include it as a standard for the revised Plans. It is foreseeable that National Marine Fisheries Service and U.S. Fish and Wildlife Service would still require it through a Biological Opinion term and condition again.

While we do not anticipate many miles of road decommissioning on any of the National Forests over the life of the plan, we do anticipate some reductions in places where they may no longer be needed, may be contributing to degraded water quality and inhibiting achievement of desired conditions for water quality, or other watershed function parameters. Net increases in the road network would detract from that desired condition, as research from the Interior Columbia Basin and other research has shown over the years that aquatic habitat, aquatic species populations, and water quality tend to decline as road densities increase at the subwatershed scale. Site-specific and project-level planning for both road construction and road decommissioning on the National Forests must comply with the revised Forest Plans, and would conform to direction in the National Environmental Policy Act including public involvement and participation

Watershed: Monitoring

401. **Concern Statement:** Water quality monitoring objectives should be developed through a multi-agency process and address multiple scales. The Forest Service should not use State-listed impaired waters, on the 303(d) list, as parameters to inform water quality monitoring because impaired streams and rivers are never removed from these lists once added. Others suggested the Forest Service should monitor 303(d) streams to assess sediment and pollutants where agency land management activities occur.

    Response: The commenter is referring to the bi-annual integrated reports prepared by the Oregon Department of Environmental Quality at: http://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx. Each report lists streams that are added to 303(d) lists and streams that are removed from the list, and includes the rationale for de-listing. In Oregon, streams are placed in one of three categories: (4A) water quality limited and Total Maximum Daily Load completed; (4B) water quality limited and total maximum daily load needed; or (5) water quality limited 303(d) list, total maximum daily load needed. The Department of Ecology in Washington, prepares similar lists. Streams are often, but not always removed from the 303(d) list once a total maximum daily load has been approved by the Environmental Protection Agency. Streams may also be removed from the 303(d) list if the listing criteria have changed, if

new data does not support the listing, or if the stream was originally listed for a parameter that is not considered a pollutant (habitat modification, for example). Removal from state 303(d) lists does not imply that water quality is restored. The status of individual streams is reviewed after all measures identified in total maximum daily load analyses have been implemented, at which time additional measures may be taken, if needed.

402. **Concern Statement:** The Forest Service should address why it has not completed or implemented its total maximum daily loads or water quality restoration plans for Forest Service subbasins and watersheds, as listed in the forest revision plan.

    Response: The Forest Service is not involved directly in the completion of total maximum daily loads. Total maximum daily loads are required by the Clean Water Act to determine the amount of a pollutant allowable in a stream or stream reach that would result in meeting State water quality criteria. By law, total maximum daily loads are completed by the States. The authorized agencies are the Department of Environmental Quality in Oregon and Department of Ecology in Washington. By agreement with Oregon Department of Environmental Quality, national forests in Oregon complete Water Quality Restoration Plans once total maximum daily loads are complete. The completion of Water Quality Restoration Plans is not a Forest Plan issue and depends on staffing, funding, and present priorities of the individual national forests. Total maximum daily loads are typically written to address a specific parameter (temperature, sediment) but streams may be listed for multiple parameters and there may be cases in which the parameter addressed in the total maximum daily load is not a listing criteria for streams within a given national forest.

403. **Concern Statement:** The Forest Service should strengthen its watershed monitoring to support adaptive management and well-defined adjustments, tied to the 2002 Oregon Department of Environmental Quality memorandum of understanding with the Forest Service. The Forest Service should not use “proper functioning condition” in its monitoring framework.

    Response: The use of the term “properly functioning condition” is not strictly linked to assessments of riparian and wetland condition developed by the Bureau of Land Management (Prichard et al 1993, Prichard 1999) and has been accepted for use in other contexts.

    The terms “properly functioning,” “functioning at risk,” and “impaired function” are defined and used to categorize streams in the Forest Service Watershed Condition Framework (USDA-FS 2011). The categories “functioning,” “functioning at risk” and “functioning at unacceptable risk” were introduced in PACFISH and INFISH for use in the Matrix of Pathways and Indicators (NMFS 1996, USFWS 1998).

    Best management practices are described in (USDA-FS 2012) and the language used in the Forest Plans is as written in the National Best Management Practices for Water Quality, National Core BMP Technical Guide.

Watershed: Riparian- Riparian Management Areas (RMAs)

404. **Concern Statement:** The Forest Service should not change Riparian Habitat Conservation Areas (RHCAs) to Riparian Management Areas (RMAs) as the change would allow for more uses of the land. Such a change also marginalizes PACFISH and INFISH direction, which could harm Native American treaty rights.

Response: Riparian management areas for Alternatives B, E, and F would use the same basic definitions as riparian habitat conservation areas to define extent. Riparian management areas are designated as management areas where specific desired conditions, standards, and guidelines apply. Riparian goals in PACFISH and INFISH are rearticulated as desired conditions for the action alternatives. Riparian management area widths and extent are similar to riparian habitat conservation areas except that a width of 100 feet would apply to all seasonally flowing streams and small wetlands, whether or not the streams are fish bearing. The management of riparian management areas and riparian habitat conservation areas would be similar in that work within riparian management areas would have to show progress towards desired conditions, and any management activity conducted within them would have to be designed specifically for the benefit of aquatic and riparian-dependent resources, whereas management of riparian habitat conservation areas currently requires that attainment of riparian management objectives not be delayed (USDA Forest Service 1995).

405. **Concern Statement:** The Forest Service should not underrepresent the number of acres in Management Area 4B Riparian Management Areas by only counting those that exist within Management Area 4A General Forest.

    Response: This has been corrected in the Final Environmental Impact Statement and the Forest Plans. The omission was not intentional, but was based on how best to display where the management direction associated with riparian management areas would apply. Riparian areas within wilderness and roadless areas, wild and scenic river corridors, among others, already have management direction that protects the resources values within them. The comment is correct in that the desired conditions for riparian management areas are intended to apply to all riparian areas. Standards and guidelines are intended to constrain which management actions may be used and how they are implemented and are most applicable to General Forest.

406. **Concern Statement:** The Forest Service should allow for the adjustment of riparian area zones within Management Area 4B over time through adaptive management, especially as scientific knowledge evolves.

    Response: The intent of riparian habitat conservation areas in PACFISH and INFISH was that the boundaries could be adjusted as long as aquatic and riparian resources remained protected. Adjusting the boundaries has been difficult in practice. The intent of riparian management areas is that the boundaries will be delineated during project planning. Boundaries of riparian management areas are intended to include unstable slopes and landslides so it is likely that at least some riparian management area boundaries will be expanded. Riparian areas provide a number of functions (FEMAT 1993). Changes to riparian management area boundaries may have to display that riparian areas will be able to provide these functions if riparian management area widths area changed, just as management actions will be required to either maintain riparian conditions or display progress towards desired conditions, whichever is applicable.

407. **Concern Statement:** The Forest Service should not have riparian management area widths of 100 feet for ephemeral and intermittent streams in Management Area 4B because these areas are not true riparian areas. In addition, the excessive buffer width could reduce lands available for timber harvest.

    Response: Ephemeral and intermittent streams together may comprise 70-80 percent of the channel network and generate most of the streamflow in any given watershed (MacDonald and Coe 2006). Ephemeral streams flow for a few days to several weeks

each year, on average. It is during this period that approximately 80 to 90 percent of sediment transport occurs. These streams are important sources of organic matter, sediment, and large wood, some of which is only delivered from intermittent and ephemeral headwater tributaries to higher order streams by catastrophic events such as debris flows (Benda 1990). The provision of large wood from these streams is all the more critical given the apparently large deficit of wood in managed streams in the Blue Mountains, as displayed in the "Watershed Function, Water Quality and Water Uses" section of the Final Environmental Impact Statement. Most of the wood delivered to streams is expected to come from a zone that is roughly 100 feet wide on either side of streams (Reeves et al. 2016). The fact that some streams do not support true riparian vegetation belies their importance to the channel network. While channel and bank stability in larger, low gradient streams is strongly influenced by true riparian vegetation, stability of steep headwater streams is derived from tree roots, log steps, and coarse woody material.

408. **Concern Statement:** The Forest Service should not use 300 feet as the width of a riparian buffer because scientific support for the 300-foot buffer is linked to factors like steep slopes. Others suggested the Forest Service should use the Oregon Forest Practices Act to inform riparian widths.

    Response: Riparian management area widths are based, in large part, on the functions provided within this zone, including the recruitment of large wood, microclimate, shade, and the filtering of sediment and nutrients. FEMAT (1993) and Reeves et al. (2016) displayed that some of these functions may be provided by lesser riparian management area widths, but providing all of them requires wider riparian management areas. Pollock and Kennard (1998) argued that provided shade and microclimate required buffer widths greater than 250 feet, while Reeves et al. (2016) argued that most wood recruitment occurs from within 100 feet of streams, but that most riparian functions can be retained if some management actions occur outside of this zone.

409. **Concern Statement:** The Forest Service should have a 300-foot buffer for all streams, regardless if fish-bearing or seasonally flowing.

    Response: Tang and Montgomery (1995) concluded that 100-meter riparian buffers would include 75-95 percent of unstable areas in watersheds on the Olympic Peninsula, Washington. Extending riparian management area boundaries to include unstable lands, as proposed for the revised Forest Plans, would potentially have the same effect, since the need for larger buffers is based at least in part on the occurrence of steeper, unstable slopes.

410. **Concern Statement:** The Forest Service should limit ground-disturbing activities, including timber harvests, in naturally sensitive riparian areas and detail which uses are permitted. The Forest Service should create standards to prohibit landings, skid trails, staging and decking in riparian areas to prevent damage to aquatic resources. Riparian Management Areas and Riparian Habitat Conservation Areas should have standards that emphasize natural processes (like insects, fire, and disease) and snags and downed wood.

    Response: As stated in Standard RMA-1, management actions within riparian management areas must either maintain riparian conditions, if properly functioning, or display progress towards desired conditions, if not properly functioning. Standards and guidelines are included in the preferred alternative that limit the location and use of roads and landings within riparian management areas.

411. **Concern Statement:** The Forest Service should not limit levels of riparian vegetation use, as these areas should be open to multiple use. Riparian habitat conservation areas and riparian management areas should be suitable for timber production. Timber removal is needed for ecological health, even within riparian habitat conservation areas and riparian management areas, so riparian areas are not overstocked with timber and then lost to fires, insects and disease.

    Response: The intent of riparian management areas is that management actions will benefit aquatic and riparian-dependent resources. Timber harvest may occur within riparian management areas if it results in progress towards desired conditions, such as the reestablishment of riparian shrubs or hardwoods in areas where they are currently excluded by dense, overstocked conifer stands. It is precisely because riparian areas perform multiple functions that they are unsuitable for scheduled timber production, but may be available for timber harvest if it aids in achieving desired conditions.

412. **Concern Statement:** The Forest Service should remove standard MA 4B RMA-2 limiting use of herbicides in riparian areas because it is repetitive of existing regulations.

    Response: The standard is carried forward from PACFISH and reinforces the intent that herbicide use will only occur to maintain, enhance, or restore aquatic and riparian resources in a manner that does not harm aquatic or riparian resources and this likely repeats more than one existing law, including the Clean Water Act.

413. **Concern Statement:** The Forest Service should ensure that the screens used in standard MA 4B RMA-5 to prevent fish entrainment meet State criteria.

    Response: This is standard practice and is specified in Fire Operations Handbooks, which recognize and are consistent with, the screening criteria of State agencies in Oregon and Washington. By Forest Service regional direction and policy, screens deployed to prevent entrainment are consistent with National Marine Fisheries and U.S. Fish and Wildlife Service specifications, as agreed through previous Endangered Species Act consultations at the national forest level. We believe that these screening specifications also meet State criteria.

414. **Concern Statement:** The Forest Service should allow trail construction (for motor vehicle use) as suitable in MA 4B.

    Response: We believe allowing motorized trail construction as a suitable use would not be consistent with achieving desired conditions for riparian management areas or for watershed function, riparian function, or hydrologic function. Suitable uses, along with standards and guidelines, were developed to help us move toward desired conditions for riparian management areas. We do not have road density standards specific to riparian management areas. We do have road density standards that apply to key watersheds.

415. **Concern Statement:** The Forest Service should not require that side-casting be avoided, as stated in standard MA 4B RMA-RD-1 S-49, because exceptions need to be made for critical roads like the Dry Creek Road in Wallowa County. Other factors to be considered for this and all road-related riparian management area standards and guidelines include the added construction and maintenance costs and the need to satisfy valid existing rights; therefore, all road-related standards and guidelines in riparian management areas need to state “when feasible, considering the associated costs.”

    Response: We believe that methods and practices presently in place allow this standard to be met.

416. **Concern Statement:** The Forest Service should broaden its standard MA 4B RMA-HYD-1 regarding special uses in riparian areas beyond a hydropower category.

    Response: The wording has been changed in the Forest Plans and Blue Mountains ARCS (Appendix A).

417. **Concern Statement:** The Forest Service should not restore camps, roads and trails within MA 4B riparian areas, as listed in MA4B FMA-FIRE-1, if they existed prior to firefighting purposes.

    Response: The guideline (now FM-1G) has been edited and states: "If the only suitable location for such activities is within a riparian management area, use may be granted following review by a resource advisor and discussion with the agency administrator . . ." The intent, after they are used for unplanned fire use, is to restore sites to the condition they were in before being used as a fire camp or for fire suppression, and can include decompacting soils, reseeding, removal of noxious weeds, and removing trash, among other things.

418. **Concern Statement:** The Forest Service should not write MA 4B standards and guidelines as applicable both "inside and outside" of riparian management areas because this inflicts management guidance outside of MA 4B that may or may not be part of the management goals, desired conditions or needs of those areas.

    Response: The language only occurs in one standard (RE-4) that specifies hydrologic connectivity between roads and streams is minimized. Because source roads often are outside of riparian management areas and may be capable of delivering sediment to streams that are, by definition, within riparian management areas, the standard is worded appropriately.

Watershed: Roads

419. **Concern Statement:** The Forest Service should explain what type of treatment it intends to use on the surface of 30 to 35 miles of roads, in each national forest, in its 1.1 Watershed Function objective to improve hydrologic function.

    Response: Approaches to road-stream crossings and cross-drain culverts are the two most common sources of sediment delivery to streams (Ketcheson and Megahan 1996, Burroughs and King 1989). Potential treatment measures for these roads include any method that results in dissipating runoff from forest roads. This can include outsloping road surfaces, decreasing the spacing between drainage features, adding water bars, adding gravel to road surface, or decommissioning roads where road related risks are high and road-related runoff cannot otherwise be effectively reduced. Specific measures to reduce sediment delivery from forest roads to streams and reduce the hydrological effects of roads will be determined during site-specific project planning. Surfacing road approaches with crushed rock or gravel and diverting road runoff away from stream crossings have been effective methods of reducing sediment. Dissipating the runoff from cross drain culverts is also effective.

    Watershed-related objectives are intended to be implemented first in priority watersheds. Road-related objectives are based on 25 percent of completed road maintenance miles for the 3-year period ending in 2012 then adjusting for differences, including budget assumptions, between alternatives. Depending on the alternative, 260-800 miles of roads are expected to be treated within 10 years, representing 20-50 percent of hydrologically connected roads in priority watersheds on the Malheur National Forest, 75-223 percent

of hydrologically connected roads in priority watersheds on the Umatilla National Forest, and 30-92 percent of hydrologically connected roads in priority watersheds on the Wallowa-Whitman National Forest. If the objective exceeds the actual number of connected roads in priority watersheds, then it is expected that any additional work would be conducted in other key watersheds.

It's important to note that this is based on studies conducted on several national forests that have found that a large percentage of road-related sediment is derived from a small percentage of roads and that treating the roads that are found to have the greatest impact is a more cost-effective method for reducing road-related sediment delivery to streams as well as reducing the hydrologic effects of the existing road network.

420. **Concern Statement:** The Forest Service should analyze existing road densities at the subwatershed scale. Road densities should not exceed 2 miles per square mile in subwatersheds or 1 mile per square mile for watersheds containing core and critical habitats for listed and at risk species.

Response: Refer to the response to the previous comment. Road densities have been computed by watershed and subwatershed across all three National Forests. Road density is included in the Matrix of Pathways and Indicators (Blue Mountains ARCS, Appendix A), in which subwatersheds with road densities of less than 1 mile per square mile are considered functional (in watershed occupied by bull trout) and subwatersheds with road densities of less than 2 miles per square mile are considered functional for watersheds occupied by steelhead or Chinook salmon.

Average existing and open road densities on the National Forests are 3.53 existing (2.1 open) on the Malheur National Forest, 2.1 existing (1.1 open) on the Umatilla National Forest, and 3.0 existing (1.5 open) on the Wallowa-Whitman National Forest. Individual watersheds may have higher or lower road densities as described in the watershed analysis of the Final Environmental Impact Statement. More than 2,200 road miles have been decommissioned and more than 9,900 miles of roads have been closed on the three National Forests since 1990.

The Forest Plans contain an objective for reducing road-related sediment delivery to streams, based on the knowledge that as much as 90 percent of sediment delivery to streams comes from as little as 10 percent of the forest road network. Based on this, identifying and treating the roads and road segments most responsible for sediment delivery to streams (as well as altered hydrology) is more likely to benefit watershed and aquatic habitat conditions than a strict adherence to road density standards that may or may not address the local effects of specific roads. All this being said, we also recognize that not all of the hydrologic effects of roads can be eliminated and roads that are high sources of sediment delivery to streams that cannot be effectively treated will remain candidates for closure or decommissioning. For key watersheds and watersheds containing critical habitat for listed fish species the revised Plans will include a standard (KW-1) that requires reductions in road-related risk, depending on watershed conditions.

421. **Concern Statement:** The Forest Service should determine the hydrologic connectivity of roads on a case-by-case basis and remove guideline WR-3, which calls for minimization of hydrologic connectivity from roads and trails. In addition, the Forest Service should coordinate any actions with the county where such roads are located.

Response: As stated in the Draft Environmental Impact Statement, that is the intent. The Draft and Final Environmental Impact Statements used a map-based calculation of roads

within 300 feet of streams as an approximation of the miles of hydrologically connected roads, following the Forest Service Roads Analysis Guide (USDA-FS 1999). The Draft and Final Environmental Impact Statements define hydrologically connected roads as roads or road segments that deliver water or sediment directly to streams.

The roads analysis guide suggested using a fixed buffer as a starting point and gives as an example, from the Orleans District of the Six Rivers National Forest, that a fixed buffer of 300 feet encompassed 90 percent of roads with inboard ditches. Road crossings and cross drain culverts are the two most commonly cited sources of road-related sediment to streams, and sediment from culverts draining inside ditches have the longest known travel distances. A distance of 300 feet has often been cited as the maximum travel distance of road related sediment below culvert outlets, although Megahan and Ketcheson (1996) cited a 2 percent probability of travel distances greater than 200 meters (660 feet). Burroughs and King (1989) noted an average sediment travel distance of 127 meters (range 0 to 639 feet) with an 20 percent probability of travel distances greater than 200 feet, and also concluded that a slope distance of 175 feet is required to prevent 80 percent of cross-drain culverts from contributing sediment to streams. Megahan and Ketcheson (1996) and Ketcheson and Megahan (1996) developed a predictive equation for the probability of sediment transport distance below the outlets of cross drain culverts which predicts a 1 percent probability of transport distance of 232 meters (760 feet) and a 20 percent probability of transport distances of 92.5 meters (300 feet).

The distance of 300 feet is used to approximate the numbers of miles of roads that may be hydrologically connected. This results in an estimated 51 percent, 37 percent, and 44 percent of existing roads being hydrologically connected on the Malheur, Umatilla, and Wallowa-Whitman National Forests, respectively. This compares with 24 to 57 percent of roads being connected to streams in studies by Coe (2006), La Marche and Lettenmaier (2001), and Wemple et al. (1996). In the example of the Six Rivers National Forest, of roads within 100 meters of streams, 30 percent of upper slope roads, 54 percent of midslope roads, and 72 percent of lower slope roads were found to be hydrologically connected to streams.

422. **Concern Statement:** The Forest Service should include guideline WR-3 in the final plan to minimize hydrological connectivity of roads and trails.

Response: Guideline WR-3 is retained in the preferred alternative as RE-4S. The extent of hydrologically connected roads is approximated in the Draft and Final Environmental Impact Statements but the location of specific connected road segments requires identification and inventory using, for example, methods described in Black et al. (2012), Cissel et al. (2012), and Nelson et al. (2010).

All alternatives also include guideline RF-11, which states: “Locate roads to minimize delivery of water and sediment from roads to streams. Avoid or minimize disruption of hydrologic flow paths, including diversion of streamflow and interception of surface and subsurface flow when constructing, reconstructing, and maintaining roads or landings.”

The objective for reducing road-related sediment delivery to streams applies to all alternatives, including the preferred alternative.

423. **Concern Statement:** The Forest Service should not improve watershed health at the expense of motorized recreationists by limiting their road access, particularly to river crossing roads like one crossing Dale Creek on the Umatilla National Forest.

Response: The authority to close a specific road lies with District Rangers and Forest Supervisors and is not a decision that is made in forest plans. The decision to block all-terrain vehicle access at the location described would have been a district project-level decision. The opportunity for public comment on such proposals is always provided before any such action is taken. The Forest Plans describe desired conditions for stream channels and for road and trail systems, but do not make decisions on where to implement activities that would help to achieve those desired conditions.

Watershed: Use and Rights

424. **Concern Statement:** The Forest Service should recognize the role of the States to regulate water rights and water use, including in-stream flows. Guideline MA 4B RMA-4 should remove reference to in-stream flows.

Response: Forest plans and the direction they provide in the form of desired conditions, standards, and guidelines are intended for the management of National Forest System lands within the Malheur, Umatilla and Wallowa-Whitman National Forests. We recognize that the distribution of land ownerships places limitations on the degree to which "connectivity" can be attained, but nothing precludes the Forest Service from seeking to provide connectivity within the boundaries of the National Forests. RMA-4 is intended to guide the location of water drafting sites within the National Forests so that adverse effects to aquatic and riparian resources are avoided. The intent of the guideline is specific to avoidance of impacts to surface resources, including instream flows, and is unrelated to water rights as managed by the states of Oregon and Washington. Management and protection of surface resources within the National Forests are within the authority of the Forest Service granted by the Multiple Use and Sustained Yield Act of 1960, the National Forest Management Act of 1976, and other federal laws.

425. **Concern Statement:** The Forest Service should broaden the primary designated beneficial use of water on National Forest System lands beyond cold-water fish habitat to include human use. Use of water from the Blue Mountains should be for domestic and municipal use, irrigation power generation, and recreation. Local residents should not have restricted access to water resources.

Response: We recognize the human use of water by acknowledging the multiple sources of public and domestic water supplies that originate on the National Forests, many of which are designated in the Forest Plans as Management Area 2J – Municipal Watersheds. The wording in section 1.11 of the Forest Plans has been modified to recognize that the States have designated multiple beneficial uses of water in each subbasin, including cold water fish habitat, stock watering, irrigation, hydropower, human consumption, contact and non-contact recreation, and public water supplies. It remains that most of these uses occur downstream of the National Forests, but that cold water fish habitat occurs in nearly every watershed containing National Forest System lands. The wording has been changed to remove the word "primary," but we also point out that the Clean Water Act requires protection of the most sensitive use on the assumption that water quality for all other uses would then also be protected. Within the National Forests, in most cases, the most sensitive designated uses are for aquatic life, including cold water fish species. The right to use water, unless related to the purposes for which the National Forests were originally reserved, is subject to valid water rights granted by the States and regulated by State water rights laws. In practical terms, water quality regulations do little to restrict the quantity of water available for domestic, municipal, irrigation, power generation, or most forms of recreation.

Wilderness, Backcountry, and Wild and Scenic Rivers

Wilderness: Against Designation

426. **Concern Statement:** The Forest Service should not recommend wilderness areas throughout the three Blue Mountains national forests because the 2010 Forest Service wilderness evaluation study indicated no more wilderness areas are needed. Wilderness use is unlikely to exceed the capacity of the existing wilderness areas and there is already a high amount of wilderness land available compared to multiple use lands.

    Response: As stated in the Final Environmental Impact Statement, the "Wilderness Need Evaluation for the Malheur, Umatilla, and Wallowa-Whitman National Forests" (USDA Forest Service 2010) report findings reveal "that additional wilderness designation is not necessary within the Blue Mountain national forests." The same section also states, "However, it is noted that wilderness recommendations may also be made based on needs brought forward through public comment. Therefore, the decision to propose a wilderness recommendation may be made based on various land management strategies and factors, all of which include maintaining biological and natural function and diversity within and on the natural landscape."

    The National Forest Management Act of 1976 (Public Law 94-588) provides for multiple use on National Forest System lands. These uses, as outlined in the Act, include the coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. As with all these uses, the Forest Service must seek a balance, where no single use predominates over the others, and the Forest Service must also find a balance within each single resource use that provides sustainable ecologic, economic, and social conditions for current and future generations.

    We developed a range of alternatives allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. For example, Alternative D does not allocate any acres to Management Area 1B as the alternative's theme emphasizes active management using mechanical treatments to restore the forested landscape.

427. **Concern Statement:** The Forest Service should not recommend 91,000 acres of wilderness (preferred Alt E) because wilderness-designated lands restrict multiple-use activities, like mineral extraction and mountain biking, and impede the plan's three goals: ecological integrity, social well-being, economic well-being.

    Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. Specifically, Alternative D does not allocate any acres to Management Area 1B. See our response to the previous comment for more information.

428. **Concern Statement:** The Forest Service should not recommend wilderness areas throughout the three Blue Mountains national forests because it restricts management and results in a decline in forest health through a lack of ability to manage wildfire, insects and disease, and noxious weeds. The Forest Service should not recommend areas for wilderness that have deteriorating forest conditions, like Aldrich Mountain.

    Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to

different alternatives. Specifically, Alternative D does not allocate any acres to Management Area 1B. As stated in the 1982 Planning Rule (36 CFR 219.17 (a): "Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process."

Designated wilderness does represent more restrictive management compared to other management areas. This restriction is statutory and is purposely designed as stated in the Wilderness Act (Public Law 88-577). Section 2 (c) of the Wilderness Act states: "An area of wilderness is further defined to mean in this Act an area of Undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions…" Special Provisions (Section 4 (d) (1) of the Wilderness Act provides for specific management actions, stating: "In addition, such measures may be taken as may be necessary in the control of fire, insects and diseases, subject to such conditions as the Secretary deems desirable."

Wilderness use is described in the Final Environmental Impact Statement under Chapter 3, Issue 5: Preliminary Administratively Recommended Additions to the National Wilderness Preservation System. Wilderness designations are not intended to eliminate human use, and as stated in Final Environmental Impact Statement: "Section (4)(b) of The Wilderness Act states that 'wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.' Recreation is the most obvious and reported use of wilderness."

429. **Concern Statement:** The Forest Service should not recommend wilderness areas throughout the three Blue Mountains national forests because it does not have sufficient funding to manage it.

Response: National Forest System lands allocated to preliminary administratively recommended wilderness area (Management Area 1B) will be managed according to corresponding desired conditions; and management activities within Management Area 1B will be implemented using associated standards and guidelines. Budget considerations are not specifically integral to the Forest Plan revision process. The planning regulations (1982) at 36 CFR 219.10 (e) state: "Subsequent administrative activities affecting such lands, including budget proposals, shall be based on the plan."

430. **Concern Statement:** The Forest Service should not recommend additional wilderness areas because these lands will be managed for wilderness characteristics, essentially creating de facto wilderness that only Congress should designate. For the same reasoning, the Forest Service should avoid creating nonmotorized backcountry (Management Area 3A) or wilderness study areas (Management Area 1C) because these lands will also be managed as de facto wilderness.

Response: Forest Service regulation requires units to assess and recommend wilderness additions during the plan revision process (36 CFR 219.17 (a)), and Forest Service policy (Forest Service Handbook) directs that any area recommended for wilderness or wilderness study is not available for uses or activities that may reduce the wilderness potential of an area. The intent is that areas recommended for wilderness retain the wilderness characteristics that make them eligible for inclusion in the National Wilderness Preservation System as established by the Wilderness Act. The Forest Service can only recommend wilderness area allocations; only Congress can designate wilderness areas through the legislative process. Recommended Wilderness Areas

(Management Area 1B) are therefore managed to preserve wilderness characteristics, but they are not designated Wilderness, and therefore are not subject to the statutory prohibitions outlined in the Wilderness Act.

Wilderness study areas (Management Area 1C) are comprised of lands previously identified through congressional review processes. These areas are intended for additional study to determine their eligibility for inclusion in the National Wilderness Preservation System. The Homestead Wilderness Study Area, located on the Wallowa-Whitman National Forest, represents the total area allocated to Management Area 1C. A wilderness study completed by the Bureau of Land Management in 1991 included this portion of the wilderness study area and did not propose to recommend this area for wilderness designation. The study has not yet been accepted by Congress, so these acres remain in Management Area 1C. Wilderness values, resources, and characteristics will continue to be protected until Congress either designates the area as part of the National Wilderness Preservation System or releases the area from consideration.

The majority of acres allocated to Management Area 3A (Backcountry non-motorized vehicle use) overlap with inventoried roadless areas, which are not assigned to their own, specific management area. Inventoried roadless areas overlap with multiple management areas, with most of the overlap occurring in MA 1B, MA 3A, and MA 3B. Other overlap occurs in Special Areas (MA 2 category). Regardless of these overlapping management areas, where inventoried roadless areas are present, the prohibitions outlined in the 2001 Roadless Area Conservation Rule apply.

Inventoried roadless areas prohibit timber production and road construction (with some exceptions) to maintain and protect social and ecological values and characteristics. These areas provide for primitive and semi-primitive nonmotorized use along with semi-primitive motorized classes of dispersed recreation for inventoried roadless areas that overlap with Management Area 3B (Backcountry motorized use) (see response below in Wilderness: For Designation for entire listing of inventoried roadless area benefits).

431. **Concern Statement:** The Forest Service should not place buffers around wilderness, through recommended wilderness areas and backcountry designations, as the courts have ruled there can be no buffers around wilderness.

Response: We agree that the Forest Service should not establish "buffers zones" surrounding designated wilderness, and the revised Forest Plans do not intend to create these types of buffers. As stated in the Final Environmental Impacts Statement: "Gorte (2011) noted that while the Wilderness Act of 1964 does not speak to the issue of buffer zones around wilderness areas, subsequent legislation has prohibited creating buffer zones that would 'restrict . . . uses and activities on federal lands around the wilderness area." The first explicit language was enacted in 1980 in P.L. 96-550; § 105 states:

> "Congress does not intend that the designation of wilderness areas . . . lead to the creation of protective perimeters or buffer zones around each wilderness area. The fact that nonwilderness activities or uses can be seen or heard from areas within the wilderness shall not, of itself, preclude such activities or uses up to the boundary of the wilderness area."

Nearly identical language has been included in 30 wilderness statutes since 1980 (Gorte 2011).

The management area maps for each alternative display the varying allocations for each alternative. The maps display a wide range of management areas that adjoin designated

wilderness, including: intensively managed areas allocated to Management Area 5 (Developed Sites and Administrative Areas) and Management Area 4 (General Forest); backcountry motorized and nonmotorized areas (Management Areas 3A and 3B) that largely overlap Inventoried Roadless Areas; special areas (Management Area 2s) that include wild & scenic river allocations, municipal watersheds, and scenic, geological, and historic areas; and recommended wilderness areas (Management Area 1B) that contain similar characteristics to designated wilderness. This broad range of management areas that are immediately adjacent to designated wilderness aligns with congressional direction to not create buffer zones surrounding designated wilderness.

432. **Concern Statement:** The Forest Service should not designate land as wilderness because discrimination occurs against recreationists, specifically motorized recreationists, including snowmobilers. Users would not be able to drive within these roadless areas.

Response: As noted in responses above, the Forest Service considers, analyzes, and proposes recommended wilderness areas through the plan revision process. Lands allocated to Recommended Wilderness Areas (Management Area 1B) are consistent with existing regulation and policy. The revised Forest Plans allocate management areas and provide suitability ratings for each management area for a range of activities, including motor vehicle use for both summer and winter. Suitability ratings align with management area desired conditions, and to adhere to existing Forest Service policy, motorized use (both summer and winter) are rated as unsuitable in Recommended Wilderness (Management Area 1B). The revised Forest Plans do not limit or reduce levels of access or propose site-specific changes to the national forest transportation system, and reasonable restrictions on motor vehicle use, applied consistently to everyone, are not discriminatory. There is no requirement to allow people with disabilities to use off-highway vehicles or other motor vehicles on roads, trails, and areas that are closed to motor vehicle use.

The revised Forest Plans establish a range of management areas to reflect multiple uses by national forest recreationists. There is a range of recreation opportunities and the Forest Service strives to provide a balanced approach whereby motorized users have ample opportunity to express their preferred recreational uses; nonmotorized users have similar opportunities to express their recreational preferences; and areas where both motorized and nonmotorized user groups can enjoy their preferred outdoor recreation experiences in combined recreation use settings.

433. **Concern Statement:** The Forest Service should not recommend wilderness areas throughout the three Blue Mountains national forests because it emphasizes opportunities for wilderness recreationists, who are a very small percent of total recreationists, and limits opportunities for elderly and handicapped who depend on motorized use.

Response: The Revised Forest Plans align with the National Forest Management Act of 1976 (Public Law 94-588) and provide for multiple uses of National Forest System lands that includes both outdoor recreation and wilderness. The Blue Mountains national forests also provide a range of recreation opportunities that accommodate different recreational preferences. In some cases, multiple uses create conflicts between resources uses, and the Forest Service strives to balance these uses to reduce the amount and severity of resource conflict. We recognize that not every single acre of national forest lands needs to accommodate every single use of those lands.

The revised Forest Plans do not limit or reduce levels of access or propose site-specific changes to the national forest transportation system, and reasonable restrictions on motor vehicle use are applied consistently to everyone—they are not discriminatory.

434. **Concern Statement:** The Forest Service should not recommend additional wilderness under the rationale that wilderness will lead to larger wildlife populations, including for elk and deer.

Response: The Revised Forest Plans allocate lands to recommended wilderness areas (Management Area 1B) designated for varying reasons, and align with Planning Rule regulations (36 CFR 219). The rationale for these allocations may include consideration of outdoor recreation, watershed, and fish and wildlife. As stated in the Final Environmental Impact Statement under Issue 5: Preliminary Administratively Recommended Additions to the National Wilderness Preservation System, "Ecological benefits include maintaining species diversity, conserving a 'reservoir' of ecological processes and a diversity of genetic material, protecting threatened and endangered species, protecting watersheds, maintaining large, contiguous, non-fragmented wildlife habitats, and serving as a base line for natural conditions to compare with changes in other environments (Dawson and Hendee 2009)." These benefits serve multiple species and are not solely targeted to increase elk and deer populations, but rather to service entire ecological communities that may also include benefits for elk and deer.

435. **Concern Statement:** The Forest Service should remove several areas recommended for wilderness or wilderness expansion because these areas are not used by the public, not managed by the Forest Service, or will not provide significant wilderness benefits. These areas include Monument Rock, North Fork John Day, Eagle Cap, Huckleberry Roadless Area, Dutch Flat within Twin Mountain, North Fork Umatilla, Hellhole, Greenhorn Mountain, Aldrich Mountain, and McClellan Mountain.

Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. For example, Alternative D does not allocate any acres to Management Area 1B as the alternative's theme emphasizes active management using mechanical treatments to restore the forested landscape. Alternative C allocates the greatest amount (acres) of land to recommended wilderness areas based on its passive restoration theme. The remaining alternatives fall in between these two alternatives.

Individual areas that may be allocated to Recommended Wilderness Areas (Management Area 1B) are generally comprised of inventoried roadless areas. These lands are generally allocated to three primary management areas including Recommended Wilderness Areas (Management Area 1B), Backcountry (nonmotorized use; Management Area 3A), and Backcountry (motorized use; Management Area 3B).

In considering the public comments received, it is important for readers and decisionmakers to understand that the comment analysis process does not treat public input as if it were a vote. Rather, the content analysis process ensures that every comment is considered during the process, regardless of where the commenter resides.

436. **Concern Statement:** The Forest Service should not propose lands as wilderness or roadless area if they contain routes, visible roads or past timber sales that disqualify them, such as the Huckleberry Roadless Area.

Response: As noted in responses above, the Forest Service considers, analyzes, and proposes recommended wilderness areas through the plan revision process as directed by existing regulation and policy. As stated in the 1982 Planning Rule (36 CFR 219.17 (a): "Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process."

In contrast, the Forest Service's 2001 Roadless Area Conservation Rule (36 CFR 294) was issued on January 12, 2001, and established a network of Inventoried Roadless Areas throughout National Forest System lands. The forest plan revision process does not modify, adjust, subtract, or add to the network of inventoried roadless areas.

The criteria to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007). This policy was used for identifying areas that qualify for a proposed recommended wilderness area and to determine each area's capability, availability, and need.

437. **Concern Statement:** The Forest Service should propose small wilderness areas so that these can be more easily accessed by families.

Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. The criteria to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007). This policy was used for identifying areas that qualify for a proposed recommended wilderness area and to determine each area's capability, availability, and need. Both the Wilderness Act and Forest Service policy establish size criteria when evaluating individual areas. . Additional management areas within the Revised Forest Plans provide for nonmotorized, quiet recreation opportunities (e.g. Management Area 3A: Backcountry (nonmotorized)), and these areas offer varying size ranges and proximity to communities that surround the Blue Mountains national forests.

The Revised Forest Plans allocate acres to Management Area 1B (Recommended Wilderness Areas); these recommendations are either contiguous to existing designated Wilderness, or in other cases represent recommendations that do not adjoin designated Wilderness. These acreages can be considered relatively small compared to the total area (acreage) represented in Management Area 1A (Designated Wilderness Area). For example, the Eagle Cap Wilderness on the Wallowa-Whitman National Forest is the largest designated Wilderness in the State of Oregon and encompasses 350,461 acres. The individual areas allocated to Management Area 1B (Preliminary Administratively Recommended Wilderness Area) vary in size from less than 500 acres (Wilderness additions) to areas greater than 20,000 acres representing relatively larger, discrete areas that do not adjoin designated Wilderness areas. The smaller recommended wilderness areas represented in the Revised Forest Plans offer wilderness experiences that are easily accessed for public use and recreational benefits.

438. **Concern Statement:** The Forest Service should not include historical grazing lands, such as the Standley Basin area, or current grazing lands as part of potential wilderness areas.

Response: The Revised Forest Plans do not make site-specific decisions regarding grazing. The plans do provide suitability ratings for selected uses and activities on the National Forests for each management areas. For all alternatives, grazing (cattle and sheep) are rated as suitable in Management Area 1B (Recommended Wilderness Areas).

If lands allocated to Management Area 1B are further considered and designated by Congress as components of the National Wilderness Preservation System, then special provisions outlined in the Wilderness Act (Public Law 88-577)) at section 4 (d)(4)(2) would apply. Specifically, the Wilderness Act states: "the grazing of livestock, where established prior to the effective date of this act, shall be permitted to continue subject to reasonable regulations as are deemed necessary by the Secretary of Agriculture." For subsequent legislation that designates wilderness areas, the "effective date of this act" language is substituted with the date of the subsequent legislation.

439. **Concern Statement:** The Forest Service should not replace the existing scenic area designation with recommended wilderness for Vinegar Hill because it would preclude use by snowmobilers.

Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. In many cases, management areas can and do overlap one another. For some alternatives, the Vinegar Hill area was allocated Management Area 1B creating overlap with the pre-existing Vinegar Hill-Indian Rock Scenic Area (Management Area 2H). For other alternatives, the Vinegar Hill-Indian Rock Scenic Area solely retains the Management Area 2H (Scenic Areas) allocation with no overlapping recommended wilderness area to better reflect existing uses of this area including winter motorized use and other land use considerations. For Alternative E-Modified, the Vinegar Hill Scenic Area was not allocated to Management Area 1B (Recommended Wilderness Area). The existing Scenic Area designation allows for an adequate range of management options to conserve the area's unique scenic character.

440. **Concern Statement:** The Forest Service should remove the Twin Mountain's Dutch Flat Trail proposed wilderness area because it is valuable for low-impact backcountry mountain bikers, who have boosted tourism and economic development.

Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. In many cases, management areas can and do overlap one another. For some alternatives, the Twin Mountains area was allocated to Management Area 1B, creating overlap with the Dutch Flat Creek, an area allocated to Management Area 2A (Wild and Scenic River (includes designated, eligible, and suitable rivers)). For other alternatives, Dutch Flat Creek solely retains the Management Area 2A (Wild and Scenic Rivers) allocation with no overlapping recommended wilderness area to better reflect existing uses of this area including mechanical use (bicycle use) and other land use considerations. For Alternative E-Modified, the Dutch Flat Trail is allocated to Management Area 2A, an allocation that will allow continued recreational use including backcountry mountain bike use. The area immediately surrounding the Dutch Flat Trail within the MA 2A corridor is allocated to Management Area 1B (Recommended Wilderness Area). Both allocations allow for an

adequate range of management options to protect and enhance Dutch Flat Creek's water quality and outstandingly remarkable values.

441. **Concern Statement:** The Forest Service should remove McClellan Mountain from recommended wilderness areas in MA 1B because there is no public access to the north side and because it has roads, trails, by-ways, livestock, and forest products. This would allow motorized use for hunters, including disabled hunters, to access and retrieve game.

    Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. The criteria to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007). This policy was used for identifying areas that qualify for a proposed recommended wilderness area and to determine each area's capability, availability, and need. The revised Forest Plans do not limit or reduce levels of access or propose site-specific changes to the forest transportation system, and reasonable restrictions on motor vehicle use are applied consistently to everyone—they are not discriminatory.

442. **Concern Statement:** For every new acre of land set aside as wilderness, the Forest Service should transfer an equal number of acres to local counties to sustain economic development.

    Response: The Forest Service is required to follow all Federal laws, regulations, and policies including those that may be enacted during the life of the revised Forest Plans. There are no regulation allowing Federal agencies to transfer land to county ownership as a result of lands being designated a component of the National Wilderness Preservation System. As stated in the revised Forest Plans for Goal 3.2 (Land Ownership): "Landownership adjustments should emphasize the following objectives: a) acquisition to meet identified resource management needs, b) acquisition contributing to consolidation that reduces administrative problems and costs and further enhances public use, and c) conveyance of land better suited for non-Federal ownership." Individual land acquisition or conveyance activity would be conducted through a separate site-specific analysis and evaluation and would include opportunity for additional public involvement and participation.

443. **Concern Statement:** The Forest Service should not rely on studies that indicate large economic contributions from quiet-use recreationists versus motorized recreationists.

    Response: We agree that studies indicating economic contributions resulting from quiet-use recreationists should not be solely relied upon. These studies may provide information on broader concepts, but overall these studies are generally inconclusive, especially regarding the cause-effect relationships between specially designated lands and quiet recreation opportunities and economic outcomes resulting from such designations. These studies are not used in the revised Forest Plans and supporting Final Environmental Impact Statement to analyze allocating lands to Recommended Wilderness Areas (Management Area 1B) or Backcountry (nonmotorized use) (Management Area 3A). A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. Similarly, the range of land allocated to Management Area 3A (Backcountry (nonmotorized use)) also varies by alternative. These allocations

provide a range of recommended wilderness and backcountry nonmotorized use that reflect different themes embedded within each alternative. The criteria used to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007).

Wilderness: For Designation

444. **Concern Statement:** The Forest Service should not rely on the 2010 wilderness needs evaluation because it does not capture all of the potential wilderness areas and excludes the non-inventoried roadless areas as eligible for wilderness designation.

    Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. The criteria to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007). This policy was used for identifying areas that qualify for a proposed recommended wilderness area and to determine each area's capability, availability, and need.

445. **Concern Statement:** The Forest Service should recommend more wilderness areas, especially in large blocks of intact habitat not subject to outside influences, in order to protect keystone species. Listed and at-risk aquatic species, including bull trout and other fish, do best in areas with minimal or no roads.

    Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative. The criteria to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007). This policy was used for identifying areas that qualify for a proposed recommended wilderness area and to determine each area's capability, availability, and need.

    We agree that areas allocated to recommended wilderness combined with designated wilderness provide multiple social and biophysical benefits and values. As stated in Final Environmental Impact Statement: "Wilderness provides both social and biophysical benefits and values . . . Cole (2005) notes that wilderness experiences include recreational and social benefits described as spiritual, educational, transcendental, and symbolic. Ecological benefits include maintaining species diversity, conserving a 'reservoir' of ecological processes and a diversity of genetic material, protecting threatened and endangered species, protecting watersheds, maintaining large, contiguous, nonfragmented wildlife habitats, and serving as a base line for natural conditions to compare with changes in other environments (Dawson and Hendee 2009). While these attributes may have overlapping benefits, they represent themes and values commonly attached to wilderness."

    The Forest Service must also strike a balance between often competing multiple uses as outlined in the National Forest Management Act of 1976 that includes outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. As with all these

uses, the forests must seek a balance, where no single use predominates over the others; and the forests must also find a balance within each single resource use that provides sustainable ecologic, economic, and social conditions for current and future generations

446. **Concern Statement:** The Forest Service should not limit the amount of recommended wilderness due to the capacity of existing wilderness. The quality of a wilderness area and its benefits to the ecosystem and citizens should not be viewed as dependent on the number of people using the area.

    Response: We prepared a Wilderness Need Evaluation (2010) that is based on six evaluation factors:

    - Location, size, type of wilderness; demographics; and accessibility
    - Use, visitor demographics, and changing patterns of use
    - Opportunities for unconfined outdoor recreation experiences
    - Refuge for species or protected areas
    - Capacity of established wilderness to support human use
    - Ability to provide for preservation of landform types and ecosystems

    Based on these combined factors—and the evaluation criteria outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007)—areas are allocated to Management Area 1B (Recommended Wilderness Area). We developed a range of alternatives allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative.

447. **Concern Statement:** The Forest Service should propose all wilderness-eligible lands, including all undeveloped roadless areas and potential wilderness areas in the backcountry, for wilderness designation. More than 5 percent of wild areas, or 91,000 acres, should be proposed, and the Forest Service should re-examine its capability assessment. Areas that should be included as recommended wilderness in the final decision include: Boulder Park, Little Eagle Meadows, Lake Fork, Wenatchee Creek, Flag Creek, North Fork Malheur, Silver Creek, Fox Creek, Upper Tucannon Roadless Area, Joseph Canyon Roadless Area, Hellhole Roadless Area, Murderer's Creek Roadless Area, McClellan Mountain Roadless Area, Five Points Creek on Mt. Emily, east face of the Elkhorn, southern edge of the Eagle Cap Wilderness, and Twin Mountain Roadless Area.

    Response: A range of alternatives was developed allocating varying amounts of preliminary administratively recommended wilderness area (Management Area 1B) to different alternatives. These allocations provide a range of recommended wilderness that reflect different themes embedded within each alternative.

    The majority of areas specifically listed are designated inventoried roadless areas as established by the 2000 Roadless Area Conservation Rule. Individual areas that may be allocated to Recommended Wilderness Areas (Management Area 1B) are generally comprised of Inventoried Roadless Areas (IRAs). These lands are generally allocated to three primary management areas including Recommended Wilderness Areas (Management Area 1B), Backcountry (nonmotorized use) (Management Area 3A), and Backcountry (motorized use) (Management Area 3B).

The criteria to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007). This policy was used for identifying areas that qualify for a proposed recommended wilderness area and to determine each area's capability, availability, and need.

Areas not specifically designated as an inventoried roadless area, but listed in the concern statement, include the Murderer's Creek Roadless Area, Five Points Creek on Mt. Emily, east face of the Elkhorn, and the southern edge of the Eagle Cap Wilderness. Each of these general areas were reviewed and allocated to varying management areas for different alternatives as part of the forest plan revision process. Management areas broadly describe areas where general management intent is similar and provides consistent guidance for areas that express similar landscape characteristics.

448. **Concern Statement:** The Forest Service should protect Joseph Canyon Roadless Area as a recommended wilderness area to heighten the conservation value of the area. Recent motorized use speaks to the need to protect the area for its historic quiet recreation.

Response: A range of alternatives was developed allocating the Joseph Canyon Inventoried Roadless Areas to varying management areas; these management areas include Recommended Wilderness Area (Management Area 1B), Backcountry nonmotorized use (Management Area 3A), and Backcountry motorized use (Management Area 3B). The designated Joseph Creek Wild and Scenic River (Management Area 2A) does not vary per alternative. Two Research Natural Areas (Management Area 2B) are also located within the Joseph Canyon Inventoried Roadless Area. For Alternative E-Modified, the Joseph Canyon Inventoried Roadless Area is allocated to Management Area 3B (Backcountry motorized use).

Inventoried roadless areas are not assigned to a specific management area. Inventoried roadless areas overlap with multiple management areas, with most of the overlap occurring in MA 1B, MA 3A, and MA 3B. Other overlap occurs in Special Areas (MA 2 category). Regardless of these overlapping management areas, where inventoried roadless areas are present, the prohibitions outlined in the 2001 Roadless Area Conservation Rule apply.

Inventoried roadless areas prohibit timber production and road construction (with some exceptions) to maintain and protect social and ecological values and characteristics including:

- high quality or undisturbed soil, water, and air
- sources of public drinking water
- diversity of plant and animal communities;
- habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land
- primitive, semi-primitive nonmotorized, and semi-primitive motorized classes of dispersed recreation
- reference landscapes
- natural appearing landscapes with high scenic quality

- traditional cultural properties and sacred sites
- other locally identified unique characteristics

449. **Concern Statement:** The Forest Service should protect Murderer's Creek Roadless Area because it serves as a core habitat for regional species of concern and federal and state-listed species, amongst other reasons.

    Response: There is no official Murderer's Creek Inventoried Roadless Area, and the commenter may be referring to a number of other possible inventoried roadless areas within the general vicinity of Murderer's Creek including Shaketable, Dry Mountain, and Aldrich Mountain Inventoried Roadless Areas. The main stem of Murderer's Creek bisects the Shaketable Inventoried Roadless Area, and this area is allocated to varying management areas for different alternatives. As with most inventoried roadless areas, management area allocation ranges for Shaketable and includes Recommended Wilderness Area (Management Area 1B), Backcountry nonmotorized use (Management Area 3A), and Backcountry motorized use (Management Area 3B). One Research Natural Area (Management Area 2B) is located within the Shaketable Inventoried Roadless Area.

    As stated in the previous response, regardless of the management area allocation, the prohibitions for inventoried roadless areas apply, and the conservation values inherent in inventoried roadless areas are emphasized that includes diversity of plant and animal communities; and habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land.

450. **Concern Statement:** The Forest Service should protect the entire Hellhole Roadless Area because its ecological value lets natural systems function, especially in light of climate change.

    Response: A range of alternatives was developed allocating the Hellhole Inventoried Roadless Areas to varying management areas; these management areas include Recommended Wilderness Area (Management Area 1B), Backcountry nonmotorized use (Management Area 3A), and Backcountry motorized use (Management Area 3B). One research natural area (Management Area 2B) is also located within the Hellhole Inventoried Roadless Area. For Alternative E-Modified, the Hellhole Inventoried Roadless Area is allocated to each of the above listed management areas (Management Areas 1B, 2B, 3A, and 3B). These management areas and associated plan components align with the intent expressed in the Roadless Area Conservation Rule and contribute to conserving the area's ecological value, its natural functions, and its role as a reference landscape.

    Inventoried roadless areas are not assigned to a specific management area. Inventoried roadless areas overlap with multiple management areas, with most of the overlap occurring in MA 1B, MA 3A, and MA 3B. Other overlap occurs in Special Areas (MA 2 category). Regardless of these overlapping management areas, where inventoried roadless areas are present, the prohibitions outlined in the 2001 Roadless Area Conservation Rule apply.

    Inventoried roadless areas prohibit timber production and road construction (with some exceptions) to maintain and protect social and ecological values and characteristics (see response to Concern Statement 448 above for complete listing of these values and characteristics).

451. **Concern Statement:** The Forest Service should add roadless areas that are contiguous with Eagle Cap Wilderness to its recommend wilderness areas.

Response: A range of alternatives was developed allocating the inventoried roadless areas that surround the designated Eagle Cap Wilderness to varying management areas; these management areas include Recommended Wilderness Area (Management Area 1B), Backcountry nonmotorized use (Management Area 3A), and Backcountry motorized use (Management Area 3B). Multiple Special Areas (MA 2 category) are located within the inventoried roadless areas that are adjacent to the Eagle Cap Wilderness. For Alternative E-Modified, the inventoried roadless areas that border the Eagle Cap Wilderness are allocated primarily to Management Area 3B (Backcountry motorized use) with the exception of the Huckleberry Inventoried Roadless Area that is allocated to Management Area 3A (Backcountry nonmotorized use).

Inventoried roadless areas are not assigned to a specific management area; however, they overlap with multiple management areas, with most of the overlap occurring in MA 1B, MA 3A, and MA 3B. Other overlap occurs in Special Areas (MA 2 category). Regardless of these overlapping management areas, where inventoried roadless areas are present, the prohibitions outlined in the 2001 Roadless Area Conservation Rule apply.

Inventoried roadless areas prohibit timber production and road construction (with some exceptions) to maintain and protect social and ecological values and characteristics (see response to Concern Statement 448 above for complete listing of these values and characteristics).

452. **Concern Statement:** The Forest Service should extend the Baldy unit of the North Fork John Day Wilderness to allow the Elkhorn Crest National Recreation Trail to be nonmotorized in the lower portions.

Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. These designations are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212). Similarly, the types of use for any specific trail are also conducted through site-specific project analysis that includes public involvement and participation.

A range of alternatives was developed allocating the Twin Mountain Inventoried Roadless Area, an area that includes the Elkhorn Crest National Recreation Trail, to varying management areas; these management areas include Recommended Wilderness Area (Management Area 1B), Backcountry nonmotorized use (Management Area 3A), and Backcountry motorized use (Management Area 3B). For Alternative E-Modified, the portion of the Twin Mountain Inventoried Roadless Area that extends south of the Baldy Unit of the North Fork John Day Wilderness is allocated to Management Area 3B (Backcountry motorized). The Elkhorn Crest National Recreation Trail is situated within this portion of the inventoried roadless area and is rated suitable for motorized use. As noted above, the types of use that occur on the Elkhorn Crest Trail are considered through project analysis and site-specific decision-making using the National Environmental Policy Act process.

Inventoried roadless areas are not assigned to a specific management area; however, they overlap with multiple management areas, with most of the overlap occurring in MA 1B, MA 3A, and MA 3B. Other overlap occurs in Special Areas (MA 2 category). Regardless of these overlapping management areas, where inventoried roadless areas are present, the prohibitions outlined in the 2001 Roadless Area Conservation Rule apply.

Inventoried roadless areas prohibit timber production and road construction (with some exceptions) to maintain and protect social and ecological values and characteristics (see response to Concern Statement 448 above for complete listing of these values and characteristics).

453. **Concern Statement:** The Forest Service should detail which roadless areas were not included as recommended wilderness and which specific Forest Service Handbook Chapter 70 criteria they failed to meet. In addition, it should not eliminate areas from eligibility for wilderness where setbacks or buffers from roads or previous disturbances has occurred or where roads are present but not maintained for travel for standard passenger vehicles.

    Response: All inventoried roadless areas were evaluated for allocation to Recommended Wilderness Areas (Management Area 1B). The criteria to analyze and propose areas for allocation to Management Area 1B (Recommended Wilderness Areas) is outlined in Forest Service policy, specifically Forest Service Handbook 1909.12, Chapter 70 – Wilderness Evaluation (2007). This policy was used for identifying areas that qualify for a proposed recommended wilderness area and to determine each area's capability, availability, and need. Some areas in the inventory did not meet the Forest Service Handbook criteria for recommended wilderness area due to harvests, roads, road buffers, and other developments.

    The criteria used for assessing capability and availability are included in the Final Environmental Impact Statement, and ratings are available in the project record. Both these criteria, capability and availability, were applied equally to each individual potential wilderness area. In contrast, the "need" evaluation was evaluated at the tri-forest scale. As stated in the "Wilderness Need Evaluation for the Malheur, Umatilla, and Wallowa-Whitman National Forests" (USDA Forest Service 2010):

    "The primary function of a Wilderness Need Evaluation is to determine the need for an area to be designated as wilderness through an analysis of the degree to which it contributes to the overall National Wilderness Preservation System. The evaluation will consider the need for wilderness based on current local, regional, and national demands and demand trends and the need to protect and preserve a resource, ecosystem, or social setting that designation to the National Wilderness Preservation System would provide."

    As stated in the response above, the "Wilderness Need Evaluation for the Malheur, Umatilla, and Wallowa-Whitman National Forests" (USDA Forest Service 2010) report findings reveal "that additional wilderness designation is not necessary within the Blue Mountain national forests." The same section also states, "However, it is noted that wilderness recommendations may also be made based on needs brought forward through public comment. Therefore, the decision to propose a wilderness recommendation may be made based on various land management strategies and factors, all of which include maintaining biological and natural function and diversity within and on the natural landscape."

    Based on this finding, the Final Environmental Impact Statement includes a range of alternatives, each with varying amounts of acreage allocated to Management Area 1B (Recommended Wilderness Area).

454. **Concern Statement:** The Forest Service should not allow over-the-snow vehicles, such as snowmobiles, in MA1B recommended wilderness areas.

Response: The revised Forest Plans describe motorized vehicle use (winter) through suitability ratings for each management area. The Final Environmental Impact Statement includes a range of alternatives where suitability ratings vary by alternative for motor vehicle use (winter) in Management Area 1B (Recommended Wilderness Area). Alternatives C, E-Modified, and E-Modified Departure each rate motor vehicle use (winter) as unsuitable in Management Area 1B. In contrast, Alternatives B, E, and F each rate this use as suitable. There is no rating for this use under Alternative D as this alternative does not allocate any area to Management Area 1B (Recommended Wilderness Area). Analysis in the Final Environmental Impact Statement discusses the effects resulting from these varying suitability ratings (see Issue 5, Environmental Consequences – Preliminary Administratively Recommended Wilderness Areas).

455. **Concern Statement:** The Forest Service should be able to update its recommendations for wilderness, especially in light of climate change, as the need arises.

Response: The 1982 Planning Rule (36 CFR 219.17 (a) states: "Unless otherwise provided by law, roadless areas within the National Forest System shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process." While evaluating areas for wilderness recommendation are inherent in land management planning and the forest plan revision process, the Forest Service is not precluded from evaluating recommendations outside of the plan revision process, where evaluations are based on changing conditions (such as climate change).

456. **Concern Statement:** The Forest Service should not allow any recommended wilderness to be open to grazing, per the Wilderness Act.

Response: The Revised Forest Plans do not make site-specific decisions regarding grazing. The plans do provide suitability ratings for selected uses and activities on the National Forests for each management areas. For all alternatives, grazing (cattle and sheep) is rated as suitable for both Management Area 1B (Recommended Wilderness Areas) and Management Area 1A (Designated Wilderness).

If lands allocated to Management Area 1B are further considered and designated by Congress as components of the National Wilderness Preservation System, then special provisions outlined in the Wilderness Act (Public Law 88-577)) at section 4 (d)(4)(2) would apply. Specifically, the Wilderness Act states: "the grazing of livestock, where established prior to the effective date of this act, shall be permitted to continue subject to reasonable regulations as are deemed necessary by the Secretary of Agriculture." For subsequent legislation that designates wilderness areas, the "effective date of this act" language is substituted with the date of the subsequent legislation.

MA1A and 1B: Standards and Guidelines

457. **Concern Statement:** The Forest Service should not discourage the use of pack animals near waterbodies in wilderness (MA 1A WIL-5) or hitching and tethering of pack animals near campsites in wilderness (MA 1A WIL-6), as it is not prohibited in the Wilderness Act.

Response: The Forest Service prepared the Eagle Cap Wilderness Stewardship Plan (USDA 1995) to "manage the wilderness under a policy of non-degradation and within the standards and guidelines to provide protection and preservation of the wilderness resources and outstanding opportunities for primitives and unconfined recreation." The stewardship plan was prepared following regulations conforming to the National

Environmental Policy Act. The revised Forest Plans include plan components (standards and guidelines) that are included in the Eagle Cap Stewardship Plan to retain consistency with this previous planning effort and to reconfirm their status through the current planning effort. The Eagle Cap Stewardship Plan also includes a Recreation Livestock Monitoring Plan (Appendix F of the Eagle Cap Stewardship Plan) that serves to evaluate existing conditions, and to focus inventory and monitoring for condition, trend, and utilization at specific camp areas, which are known to have been impacted by recreation livestock use.

458. **Concern Statement:** The Forest Service should not distance horses and other saddle and pack animals 200 feet from any lake in the Eagle Cap Wilderness. Adjust MA 1A WAW- WIL-4 to allow for horses within 50 feet of any lake in the Eagle Cap Wilderness.

    Response: As stated in the previous response, the guidance for recreation livestock use activity in the Eagle Cap Wilderness is adapted from the Eagle Cap Stewardship Plan (USDA 1995). To retain consistency with this plan, the revised Forest Plans do not alter the established standards and guidelines, including distance prohibitions, as outlined in the implementation portion of the stewardship plan.

MA3A and 3B: Backcountry and Roadless Areas

459. **Concern Statement:** The Forest Service should eliminate MA 3A/B designations, including their standards, because they do not protect the resource. The Forest Service should reduce the amount of backcountry area and increase the amount of general forest so that more area is available for timber production, motorized use, and mining. Some commenters ask that exceptions be made to nonmotorized backcountry MA 3A to allow motorized use to support grazing and timber harvest. Other commenters ask that no motorized use occur in motorized backcountry MA 3B due to the disruption of solitude.

    Response: Inventoried roadless areas, as established in the 2001 Forest Service Roadless Area Conservation Rule, are allocated to varying management areas, with the majority being allocated to three primary management areas: Recommended Wilderness Area (Management Area 1A), Backcountry nonmotorized (Management Area 3A), and Backcountry motorized (Management Area 3B). The desired conditions, suitable use ratings, and standards and guidelines for these management area designations align with the regulations outlined in the Roadless Area Conservation Rule. Prohibitions within inventoried roadless areas include road construction and reconstruction, and the cutting, sale, or removal of timber (subject to limited exceptions).

    Management Areas 3A and 3B are established as part of the management area spectrum, and inventoried roadless areas are not specifically designed to be a management area for forest planning purposes. It is common to have management areas overlap with inventoried roadless areas, and one important distinction is that inventoried roadless areas do not contain desired conditions that evidence management intent.

    A range of alternatives for management areas was developed for the Environmental Impact Statements that allocated different amount of acres to different alternatives, based in part on the theme of each alternative. For all alternatives, grazing is rates a suitable use in Backcountry (Management Areas 3A and 3B); and mining activity is subject to existing regulation and existing rights. Backcountry (Management Areas 3A and 3B) are separated into motorized and nonmotorized use to (1) allow for different recreation opportunities, (2) reflect existing uses on the landscape and, (3) provide for

varying desired conditions on the landscape. If users desire a nonmotorized experience, it is expected that those users will seek out nonmotorized areas on the landscape (Management Areas 1A, 1B, and 3A).

The draft Forest Plan and Draft Environmental Impact Statement both included the word "limited" when describing Backcountry (motorized use), Management Area 3B. Editorial efforts were made to eliminate the use of the word "limited," but not all instances where the word was used were corrected. Few or no instances of "limited" (in reference to motorized use) are found with the Final Environmental Impact Statement and Revised Forest Plans. The use of the word "limited" is unnecessary, as motorized use is either considered suitable or unsuitable for any given management area.

460. **Concern Statement:** The Forest Service should apply multiple-use management to roadless areas.

Response: Inventoried roadless areas as established by the Roadless Area Conservation Rule do represent multiple use, and are characterized by "areas that possess social and ecological values and characteristics that are becoming scarce in an increasingly developed landscape." Prohibitions within inventoried roadless areas include road construction and reconstruction, and the cutting, sale, or removal of timber (subject to limited exceptions). While restrictions in these areas prohibit timber production and road construction, they do allow for multiple uses as established by the Multiple Use Sustained Yield Act including outdoor recreation, range, watershed, and wildlife and fish purposes. Specific benefits of inventoried roadless areas are outlined in the Roadless Areas Conservation Rule and include:

- high quality or undisturbed soil, water, and air
- sources of public drinking water
- diversity of plant and animal communities;
- habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land
- primitive, semi-primitive nonmotorized, and semi-primitive motorized classes of dispersed recreation
- reference landscapes
- natural appearing landscapes with high scenic quality
- traditional cultural properties and sacred sites
- other locally identified unique characteristics

With completion of the Roadless Area Conservation Rule (RACR) in 2001, inventoried roadless areas became a designation with fixed boundaries and prohibitions set by that rule and Forest Service regulation (36 CFR 294). The revised Forest Plans do not adjust the boundaries of inventoried roadless areas, nor do they propose areas for additions to or removal from designated inventoried roadless areas.

461. **Concern Statement:** The Forest Service should not allow activities in roadless areas that impair wilderness character. Roadless areas provide habitat for rare and sensitive listed plants and wildlife, support ecological integrity, provide carbon storage, offer primitive recreation values, and support indigenous people's treaty rights and use of cultural plants. The Forest Service should better analyze cumulative impacts to roadless

area characteristics. In addition, the Forest Service should protect roadless and backcountry areas to provide for landscape connectivity.

Response: Inventoried roadless areas, as established in the 2001 Forest Service Roadless Area Conservation Rule, are allocated to varying management areas, with the majority being allocated to three primary management areas: Recommended Wilderness Area (Management Area 1A), Backcountry nonmotorized (Management Area 3A), and Backcountry motorized (Management Area 3B). The desired conditions, suitable use ratings, and standards and guidelines for these management area designations align with the regulations outlined in the Roadless Area Conservation Rule. Prohibitions within inventoried roadless areas include road construction and reconstruction, and the cutting, sale, or removal of timber (subject to limited exceptions). We agree that inventoried roadless areas maintain and protect social and ecological values and characteristics including:

- high quality or undisturbed soil, water, and air
- sources of public drinking water
- diversity of plant and animal communities;
- habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land
- primitive, semi-primitive nonmotorized, and semi-primitive motorized classes of dispersed recreation
- reference landscapes
- natural appearing landscapes with high scenic quality
- traditional cultural properties and sacred sites
- other locally identified unique characteristics

Standards in the revised Forest Plans that apply to Backcountry (Management Areas 3A and 3B) direct national forest staff to manage inventoried roadless areas consistently with the guidance in the 2001 Roadless Area Conservation Rule (36 CFR 294).

462. **Concern Statement:** The Forest Service should not place road closures on motorized backcountry MA 3B motorized backcountry areas either seasonally, by route, or by area, because it will limit opportunities for recreation, wood cutting and resource development.

Response: The Forest Plans do not designate routes, trails, or areas open to motor-vehicle uses. These designations are considered in a separate process that is completed under the Travel Management Rule (36 CFR 212). We agree that motorized access in an important component of forest management to meet the needs of many recreating publics, and where appropriate, motorized recreation opportunities may be maintained or expanded. The forest transportation system may be used to access areas for hunting, berry picking, camping, pleasure driving, firewood removal, and to access the trail system for off-highway vehicle use, bicycle, hiking, and horseback use. These trails also provide access to the backcountry for hunting, fishing, camping, photography, and many more recreation and subsistence related activities. As noted above, changes to specific routes are not a forest plan decision but an outcome of a site-specific analysis process that includes public involvement and participation.

MA1C: Wilderness Study Area

463. **Concern Statement:** The Forest Service should remove the Homestead Wilderness Study Area and any other lands from wilderness study areas (Management Area 1C) to place those lands in another management area or inventoried roadless areas.

Response: The lands allocated to Management Area 1C result from congressional direction. Those lands remain in that allocation until the study results are complete and Congress either includes those lands in the National Wilderness Preservation System; or those lands are "released" for other management consideration. Until the congressional review process is complete, the Homestead Wilderness Study (Management Area 1C) will continue to be managed in such a way as to not reduce or impair the wilderness characteristics and qualities for which the area was designated.

MA3C: Wildlife Corridors

464. **Concern Statement:** The Forest Service should not create wildlife corridors around wilderness areas, as this essentially creates wilderness buffer areas without Congressional approval. In addition, it should re-evaluate if these corridors actually increase adaptive capacity of terrestrial ecosystems.

Response: A range of alternatives has been developed around the wildlife corridor concept, and the current Alternative E-Modified does not contain any lands allocated to MA 3C. Management activity allowed in Management Area 3C is not as restrictive as designated wilderness and is not intended to create a "buffer" surrounding wilderness. For example, activities rated as suitable in Management Area 3C include mechanical timber harvest, grazing (and all mechanical and motorized support activities and facilities), motor vehicle use (summer and winter), road and trail construction (for motorized use), and mechanical fuel treatment. Additionally, structures and permitted special uses are considered suitable uses in Wildlife Corridors (Management Area 3C), further distinguishing this allocation from congressionally designated wilderness.

465. **Concern Statement:** The Forest Service should reassess the MA 3C open road density, 1 mile per square mile in Alternatives C, E and F, because it takes more than a mile of road to cross one section due to topography.

Response: A range of alternatives has been developed around the wildlife corridor concept and the current Alternative E-Modified does not contain any lands allocated to MA 3C. The road density metric is developed and applied to wildlife corridors, and the lower density value serves to maintain habitat linkages, to improve landscape connectivity, and to reduce overall human disturbance to wildlife species using these areas. As used in the revised Forest Plans and Environmental Impact Statement, road density is an indicator of the concentration of roads in an area. In most cases, the area being analyzed is not necessarily reduced to one square mile, and likely include larger areas that exceed 640 acres.

466. **Concern Statement:** The Forest Service should define "landscape connectivity," explain why unconnected landscapes cannot meet targets, and specify how landscape connectivity can be enhanced.

Response: Landscape patterns are defined as the number, frequency, size, and juxtaposition of landscape elements (stand patches) that are important to the determination or interpretation of ecological processes. As noted in the revised Forest Plans, landscape patterns contribute to landscape connectivity (how landscapes are

connected) and are interrelated with multiple resources and ecological processes. As stated in the revised Forest Plans: "Within the patterns of landscapes there is normally a predictable range of variation in: (a) stand structure and stand densities, as described in Desired Condition 1.6 and 1.8; (b) the number and types of species and their abundance, described in Desired Condition 1.7; (c) the ways natural communities form and the ways they cycle energy and nutrients through air (Desired Condition 1.9), soil (Desired Condition 1.10), and water (Desired Condition 1.11). What remains the same in the shifting mosaic of landscape patterns is how natural communities both influence and respond to disturbance regimes (Desired Condition 1.4) and the way these dynamics create recognizable patterns that repeat across the landscape over time. Terrestrial and aquatic species diversity (Desired Condition 1.2) are highly correlated with diversity of landscape patterns."

Landscape connectivity is also described this way: "cross-connected landscape patches provide quality forage, cover, and security as viable species move through porous landscapes. Landscape patterns provide a connectivity, allowing animals to move across landscapes." The desired condition for the goals stated above each identify how these elements can be enhanced to better achieve improvement for individual resources, and when combined are illustrative of how landscape connectivity is improved or enhanced through revised Forest Plan implementation.

467. **Concern Statement:** The Forest Service should create wildlife corridors to encourage genetic diversity and prevent inbreeding of wildlife, which supports Goal 1 "Promote Ecological Integrity."

Response: A range of alternatives has been developed around the wildlife corridor concept and the current Alternative E-Modified does not contain any lands allocated to MA 3C. Section 1.12 "Landscape Patterns" provides additional descriptions and desired conditions that include providing for genetic diversity, where "cross-connected landscape patches provide quality forage, cover, and security as viable species move through porous landscapes." The revised Forest Plans provide direction for managing the necessary landscape connectivity at varying scales, and project and site-specific planning and analysis will further review landscape connectivity/corridors, and other factors including open motor vehicle routes, at the project level.

468. **Concern Statement:** The Forest Service should create more wildlife corridors to create refugia for climate-challenged resources. These areas could protect species movement, especially between wilderness and roadless areas and going up and down slopes. Animals that would benefit from low road density include gray wolves, elk, lynx, and wolverine.

Response: A range of alternatives has been developed around the wildlife corridor concept and the current Alternative E-Modified does not contain any lands allocated to MA 3C. Species movement is enhanced through direction and desired conditions outlined in section 1.12 "Landscape Patterns." Designated wilderness and inventoried roadless areas also contribute significantly to retaining connectivity, providing refugia for varying climate change scenarios, and these landscapes contain historically low road densities and will continue to do so into the future.

MA2A: Wild and Scenic Rivers

469. **Concern Statement:** The Forest Service should not add any wild and scenic rivers because it cannot manage those it has and private land issues can arise.

Response: The Forest Plan revision process addresses potential wild and scenic rivers as outlined in Forest Service policy (Forest Service Manual 1924.03) and the Wild and Scenic Rivers Act (Public Law 90-542), Section 5 (d) (1). As outlined by this Act, the Secretary of Agriculture and the Secretary of the Interior administer components of the National Wild and Scenic River System, which includes the Federal land management agencies within these departments. To comply with section 3 (d)(1) of the Act, a comprehensive management plan for designated rivers is developed to provide for the protection of river values. The Blue Mountains national forests have developed comprehensive management plans for each designated component of the Wild and Scenic Rivers System. These plans provide the necessary plan components (standards and guidelines) to preserve the rivers' free-flowing condition, water quality, and outstandingly remarkable values. In the case where private lands are concerned, the Wild and Scenic Rivers Act provides substantive guidance for land jurisdiction.

470. **Concern Statement:** The Forest Service should not designate waterways as wild and scenic because more restrictions would not allow for management of insects, disease and wildfire, which would burden nearby communities and residents.

Response: The Forest Plan revision process addresses potential wild and scenic rivers as outlined in Forest Service policy (Forest Service Manual 1924.03) and the Wild and Scenic Rivers Act (Public Law 90-542), Section 5 (d) (1). Management activity within MA 2A would allow for treating insects, disease and wildfire, so long as these treatments do not impair water quality or negatively affect the identified outstanding remarkable values for a designated, eligible, or suitable river. The background section and desired conditions for Goal 1.4 (Disturbance Processes) provides additional guidance and information for wildland fire (planned and unplanned ignitions) and insects and disease.

471. **Concern Statement**: The Forest Service should recommend that additional rivers, especially within the Malheur National Forest, be designated as eligible wild and scenic rivers through river-related values identified by the public and should explain why some rivers are not eligible.

Response: The revised Forest Plans follow the inventory and evaluation process established in the Wild and Scenic Rivers Act (Public Law 90-542) and Forest Service policy. The planning process for wild and scenic rivers included substantive public involvement (three rounds of community collaborative workshops) and coordination with other Federal, State, Tribal, and local governments including established watershed councils. These efforts informed the identification and inventory processes including individual assessments for river eligibility and outstandingly remarkable values. The forests documented these assessment findings and they are available in the project record and posted on the Forest Plan revision website. The assessment findings were prepared by interdisciplinary teams and resource specialists for scenery, recreation, wildlife, fisheries, heritage resources, geology, hydrology, botany, ecology, and water quality.

472. **Concern Statement**: The Forest Service should complete its analysis of wild and scenic river status and forward the list of eligible rivers to Congress.

Response: The revised Forest Plans may include suitability studies, or may be deferred to a later time (Forest Service Handbook 1909.12 Chapter 80, Section 81). The Wallowa-Whitman National Forest had previously completed suitability studies for eligible rivers and included these finding as part of the revised Forest Plans. In contrast,

the Malheur and Umatilla National Forests have not completed the suitability studies, and will defer this process to a later time outside of the current forest plan revision efforts. The process used to recommend suitable rivers for congressional designation is outlined in the Forest Service Manual (Chapter 1920, Section 1924.11 (2)). The direction states "the Regional Forester shall notify the Chief by letter of the tentative preliminary administrative recommendations on rivers evaluated during land management planning process."

Additional Forest Service Manual direction provides that the decision document for the revised forest plans must contain the following statement: "This recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States. Congress has reserved the authority to make final decisions on designation of rivers as part of the National Wild and Scenic Rivers System."

473. **Concern Statement:** The Forest Service should add cultural value as a river-related value to its list of outstandingly remarkable values.

Response: Historic and cultural values are included as part of the eligibility criteria assessments. Specifically, Heritage Resources are include in the assessment and included the following considerations:

- Does the stream corridor contain known occupation sites used by Native Americans that are unusual, have exceptional human interest value, have national or regional importance for interpreting pre-history, been used for sacred purposes, or listed or eligible for listing on the National Register of Historic Places?
- Does the stream corridor contain known site(s) or feature(s) associated with a significant event, important person, or cultural activity from the past that was rare or unusual? Of particular importance are sites or features that are listed in, or eligible for inclusion in the National Register of Historic Places.

As with other resource areas, the assessment findings were prepared by interdisciplinary teams and resource specialists, including heritage resource specialists for each of the Blue Mountains national forests.

474. **Concern Statement:** The Forest Service should place a higher value on local fisheries in its wild and scenic outstandingly remarkable value analysis or eligible rivers.

Response: The Forest Service uses a standardized approach for evaluating the significance of outstanding remarkable values that is based on informed professional judgement and interpretation. The standardized process for evaluating these values includes:

- The use of an interdisciplinary team approach
- Consideration of uniqueness and rarity at a regional and national level
- Values must be river-related in that they owe their existence or contribute to the functioning of the river system and its environments

Resource specialists on each ranger district provided current information on river-related resources in each river corridor; categories considered include scenery, recreation, wildlife, fisheries, heritage resources, geology/hydrology, botany, ecology, and water quality.

475. **Concern Statement:** The Forest Service should analyze direct, indirect and cumulative impacts of each alternative's actions on designated and eligible wild and scenic rivers.

    Response: Management Area 2A (Designated, Eligible, and Suitable Wild and Scenic Rivers) includes desired conditions, standards, guidelines, and established management area boundaries. These combined Forest Plan components provided the necessary protection for areas (rivers) allocated to Management Area 2A and are designed to preserve the rivers' free-flowing condition, water quality, and outstandingly remarkable values. The range of alternatives, and subsequent effects resulting from each, would not change or lessen the congressionally mandated guidance or Forest Service policy regarding wild and scenic rivers components. Any future project either within or adjacent to an area allocated to Management Area 2A is subject to the National Environmental Policy Act and its implementing regulations, and such site-specific analysis includes additional opportunities for public involvement and participation.

476. **Concern Statement:** The Forest Service should tighten the MA 2A WSR-8 guideline so as to not impact roads not visible from or outside of the wild and scenic river corridor.

    Response: Based on input received through public comments, public engagement sessions, and interdisciplinary team reviews, Guideline MA 2A WSR-8 was not included in Alternative E-Modified and Alternative E-Modified Departure. The modified alternatives do include a guideline for new road and motorized trail construction (MA 2A-3G), stating: "New roads and motorized trails should not be constructed within wild and scenic classifications of Wild and Scenic River Management allocations unless no other feasible alternative exists." The plan component language indicates that site-specific analysis, including a range of alternatives, is necessary to authorize such construction. This type of project-level planning and analysis is subject to the National Environmental Policy Act and its implementing regulations, and such site-specific analysis includes additional opportunities for public involvement and participation.

477. **Concern Statement:** The Forest Service should adjust MA 2A WSR-3 guideline to allow hitching of horses within 50 feet of water areas and change MA 2A WSR-2 standard so that the use of pack animals is not discouraged.

    Response: Wild and scenic river resources and revised Forest Plan components were reviewed and refined for the Final Environmental Impact Statement to consider updated information and comments received from the public. Two additional action alternatives, Alternative E-Modified and Alternative E-Modified Departure, were developed in response to multiple resource concerns brought forward through public comment and public engagements. The changes made in the addition of those plan revision alternatives helped correct minor errors presented in the Draft Environmental Impact Statement and reflect public desires and comments.

    We agree that recreation use, including use of pack animals, in wild and scenic river corridors is an important part forest recreation, and this specific activity contributes to and enhances the outstandingly remarkable values that are commonly associated with this unique resource. The MA 2A WSR-3 guideline is not included in the modified alternatives. In order to protect water quality and conserve river values, standard MA 2A WSR-2 was retained in its entirety and states: "Hitching or tethering of horses or other saddle or pack animals to trees, except for loading or unloading, shall not be authorized at campsites within wild and scenic river corridors" (MA 2A-2S). The standard is intended to conserve river-related resources (vegetation); and alternative means of

hitching or tethering horses or other saddle or pack animals is promoted and encouraged at campsites within wild and scenic river corridors.

478. **Concern Statement:** The Forest Service should adjust the MA 2A WSR-6 guideline to make an exception for roads in wild and scenic river corridors in some cases, such as for fuel reduction.

Response: Similar to the previous response, the interdisciplinary team reviewed the Draft Revised Forest Plan components, and considered updated information and comments received from the public. Based on this review, the MA 2A WSR-6 was not included in the current modified alternatives. While this specific guideline in not included in Alternative E-Modified, it was necessary to provide specific guidance for road and trail construction activities for Management Area 2A in order to protect water quality and conserve river related values. Guideline MA 2A-3G was developed and included in the modified alternatives, and states: "New roads and motorized trails should not be constructed within wild and scenic classifications of wild and scenic river management allocations unless no other feasible alternative exists." As noted in a previous response, the plan component language indicates that site-specific analysis, including a range of alternatives, is necessary to authorize such activity. This type of project-level planning and analysis is subject to the National Environmental Policy Act and its implementing regulations, and such site-specific analysis includes additional opportunities for public involvement and participation.

479. **Concern Statement:** The Forest Service should authorize oil and gas leasing in wild and scenic river areas if such leases don't inhibit this management area's purposes.

Response: Wild and scenic river resources and revised Forest Plan components were reviewed and refined for the Final Environmental Impact Statement to consider updated information and comments received from the public. Two additional plan revision alternatives, Alternative E-Modified and Alternative E-Modified Departure, were developed in response to multiple resource concerns brought forward through public comment and public engagements. The changes reflected in the addition of these alternatives helped correct minor errors presented in the Draft Environmental Impact Statement and reflect public desires and comments.

The Draft Revised Forest Plans included Standard MA 2A WSR-11, stating: "Oil and gas leasing shall not be authorized or allowed within 1,320 feet of the high water mark in wild river corridors." This standard was not included in the modified alternatives. Removing this standard is based on the foundation that the Forest Service is required to follow all Federal laws, regulations, and policies including those that may be enacted during the life of this revised Forest Plan. Regulations regarding leasable minerals, specifically within wild and scenic rivers, are outlined in the Forest Service Handbook (1909.12, Chapter 80), and within section 9 of the Wild and Scenic Rivers Act (Public Law 90-542). Additional guidance for minerals, including locatable, leasable, and oil and gas resources, may be found in the Code of Federal Regulations, Title 36, Chapter II, Part 228.

Wildfire

Wildfire: Analysis and Planning

480. **Concern Statement:** The Forest Service should enhance its description and analysis of wildland fire as well as plan components for fire. Analysis should include area burned by decade, including on adjacent private lands, and detailed information on current conditions and risk.

    Response: Wildland fire is discussed and considered throughout the document and the detail sought is included in the specialist reports supporting the overall analysis and is available as part of the project record. Table 78 in the Wildland Fire and Fuels - Affected Environment section (Volume 2) addresses fire occurrence across the planning area from 1980 to 2017 in comparison to reference conditions. Potential for high severity fires and departure in the fire regime condition class address analysis on current conditions and risk.

Wildfire: Fuels and Fire Risk

481. **Concern Statement:** The Forest Service should treat more acres to reduce fuels, decrease the potential for severe wildfires, reach desired conditions, better meet the needs of communities, prevent fire spread to private lands, and reduce smoke emissions. Several commenters suggested treating all lands like the wildland-urban interface. A simple indicator of progress should be used rather than condition class departure.

    Response: We have added additional alternatives that consider additional treatments, all of which exceed current treatment footprints. Alternatives were added to increase acres of fire inside and outside of harvest units or to increase harvest units. Not all acres have the same need as those within wildland-urban interface areas. Treatments to protect values at risk within wildland-urban interface areas will continue to be a high priority. We have tempered these goals based on current and forecast budgets.

482. **Concern Statement:** The Forest Service should protect moist forest stands by treating fuels in adjacent drier forests.

    Response: We agree that the majority of treatments needed are in the dry forest types. Recent research (Johnston 2016) completed on the Malheur National Forest has shown that even moist forests have been highly influenced by the frequent fire regimes of the dominant dry-forests with fire return intervals no higher than 28 years in studied stands. Therefore, to meet the desired goals and provide for overall forest health, we must treat stands in moist forests as well as dry. Moist forests currently have fire return intervals outside of reference conditions, which show a need for an increase in fire. Studies show that forest management practices such as prescribed fire and mechanical fuels removal lead to increasing carbon storage.

483. **Concern Statement:** The Forest Service shouldn’t manage potential fire severity through logging and other restoration work because climate is the main driver of fire severity. Treatments may increase fire severity by opening the canopy and allowing for regeneration of many young, flammable trees.

    Response: While restoration of our forested systems, particularly dry forest types, has shown a resultant increase in modeled fire activity, the resistance to control and severity of these fires will decrease as it did prior to European settlement. As treatments continue across the landscape, the opportunities for characteristically low-severity fire will

increase while high severity and high intensity fires will decrease. An increase in fire occurrence is needed to address fire return intervals at levels lower than reference conditions.

484. **Concern Statement:** The Forest Service should create fuelbreaks, such as along major roads, and use fire lookouts.

Response: We regularly treat major roads as a matter of course for visibility and maintenance, which aid in making them available for defense corridors. The Malheur, Umatilla, and Wallowa-Whitman National Forests completed a strategic roads assessment in 2013 to be used as part of project-specific planning as opposed to addressing this at the Forest Plan revision level. The Forest Service uses lookouts and fire patrols, as well as aerial detection as a regular course of fire management.

Wildfire: Historical Range of Variability

485. **Concern Statement:** The Forest Service should document its claim that levels of mortality from insects, disease and wildfire are above the historical range and clarify where information came from on historical levels of fuel composition, fire frequency, fire pattern, and fire regime condition class.

Response: Fire frequency, pattern and fire regime condition class references are included in Table 76 in the Wildland Fire and Fuels Treatments section (Volume 2). Local research on fire history is cited in the Wildland Fire Regimes section (Volume 2) while the fire regime condition class model is a nationally recognized departure tool developed with a number of partners (Barrett et al. 2010).Insect and disease increased mortality is addressed in Volume 2 under the section on Insects and Disease.

486. **Concern Statement:** The Forest Service should reconsider whether or not moist forest types are truly departed from historical conditions. In addition, it should reconsider the historical extent of high-severity fire in ponderosa pine and dry Douglas-fir as fire scar studies bias findings towards documentation of historical low-severity fire regimes.

Response: Recent research (Johnston 2016) completed on the Malheur National Forest has shown that even moist forests have been highly influenced by the frequent fire regimes of the dominant dry-forests with fire return intervals no higher than 28 years in studied stands. Departure of moist forests is discussed in Table 78 in Volume 2 of the Final Environmental Impact Statement showing moderate departure of vegetation and the fire return interval being 3 to 4 times lower that reference conditions. Table 76 in the Wildland Fire and Fuels section (Volume 2) acknowledges that high-severity fire existed at 5-15 percent within the dry upland forests. Fire scar studies indicate a lack of record for low-severity fire, which burned at intensities that did not leave fire scars.

Wildfire: Prescribed Fire

487. **Concern Statement:** The Forest Service should reduce the level of prescribed fire in the new plans because of the limited number of days with good burn conditions, State regulations, and lack of social agreement. The Forest Service should not replace mechanical fuels treatments with prescribed fire.

Response: The concern about the ability of the Forest Service to increase prescribed burning is reasonable considering recent history; this is why mechanical treatments are also included in the analysis. Smoke management regulations for both Oregon and

Washington are in the process of being updated due to the commenter's concerns. This approach will be assessed as part of required implementation monitoring.

488. **Concern Statement:** The Forest Service should use prescribed burning when it is the most effective and least expensive management option.

Response: Prescribed fire is identified as a treatment option in all alternatives. Prescribed fire may not be appropriate as a stand-alone treatment but may need to follow other mechanical treatments to meet objectives. As stated in Volume 2 of the Final Environmental Impact Statement:

"The forests currently use prescribed burns and mechanical treatments in order to achieve multiple objectives, including reduction of activity-generated and natural fuels, wildlife habitat improvement, ecosystem restoration, and range betterment. While management techniques (including mechanical removal) may be used in order to reduce heavy fuels, they cannot always completely replace the ecological role that fire plays. Fire not only reduces the build-up of dead and downed fuel, it performs many other critical ecosystem functions. Fire can recycle nutrients that might otherwise be trapped for long periods of time in the dead organic matter that exists in many environments with slow rates of decay. It can also stimulate the production of nutrients and provide the specific conditions (including seed release, soil, light, and nutrients) that are critical for the reproduction of fire-dependent species Long et al. 2008, Thomas and Agee, (1986), Fieder (2000), and Fieder et al. (2007)."

489. **Concern Statement:** The Forest Service should not use prescribed fire where invasive annual grasses are present.

Response: These concerns will be addressed at the project-specific level.

Wildfire: Prescribed Fire - Air Quality

490. **Concern Statement:** The Forest Service should not emphasize prescribed fire in its forest plans because it will not be able to meet air quality desired conditions or state and federal regulations.

Response: The Forest Service conducts prescribed fires in accordance with the air quality standards established by the Environmental Protection Agency (EPA) and Oregon Department of Environmental Quality. This includes burning when smoke dispersal conditions are favorable to ensure air quality standards are not violated; notifying jurisdictional fire authorities and nearby communities of planned prescribed burning; and post-burn monitoring and reporting. The EPA and State of Oregon are currently reviewing smoke management plans to address restoration burning needs. The Blue Mountains national forests are actively engaged in working with partners to address social understanding of need for prescribed fire and increased smoke from restoration treatments.

491. **Concern Statement:** The Forest Service should assess the smoke and carbon impacts from anticipated wildfires and should acknowledge that smoke from wildfires is more variable than smoke from prescribed fires.

Response: We have updated language throughout the documents to ensure that this is clearer. Wildfires fall under the exceptional events rule of the Environmental Protection Agency and do not have to comply with those regulations.

Wildfire: Standards and Guidelines

492. **Concern Statement:** The Forest Service should add objectives and guidelines to support the use of managed fire.

    Response: We have clarified the language to explain that guidelines are developed in the National Forest-specific fire management plans to determine where and when managed fire is appropriate. This is addressed in the "Wildland Fire and Fuels Management" section, Environmental Consequences.

493. **Concern Statement:** The Forest Service should drop the guideline limiting the development of mechanical fireline on slopes over 35 percent.

    Response: We have clarified the language to explain when this type of fireline may be used in the standards and guidelines (FIRE-2-G-28).

494. **Concern Statement:** The Forest Service should drop the guideline limiting the use of retardants in riparian areas.

    Response: Analysis at regional and national levels describe the effects to habitat and ecosystem health and provide the basis for these limitations, NEPA (USDA Forest Service 2012) for the use of retardant was conducted at a national level and is not under analysis in this Final Environmental Impact Statement. These limitations are suspended when life or property are threatened.

495. **Concern Statement:** The Forest Service should not use "Minimum Impact Suppression Tactics" (Guideline FIRE-2) because they are too restrictive.

    Response: Minimum Impact Suppression Tactics are used to minimize suppression impacts to the greatest extent possible while meeting the overall suppression objective. These tactics are primarily used in Wilderness areas to meet wilderness values.

Wildfire: Suppression and Wildland Fire Use

496. **Concern Statement:** Managed fire, or wildfire, should be allowed in backcountry, roadless, and wilderness areas and in moist/cool and cold forests. Allowing natural fire disturbance to occur as much as possible would help restore and maintain historical conditions and transitory range and is a less expensive way to achieve desired landscape conditions. Wildfire suppression should be reserved for immediate protection of homes.

    Response: We have updated language throughout the documents to ensure that this is clearer. Protection of high values at risk will continue to be a priority. Use of managed fire is addressed in the "Wildland Fire and Fuels Management" section, Environmental Consequences. Fuels reduction activities and suppression of fire are still required due to the increase of high severity fire potential.

497. **Concern Statement:** The Forest Service should cautiously implement a policy of using unplanned ignitions to improve ecosystems. Managed wildfire should not replace other management, and social and economic issues should be considered.

    Response: Direction in the revised Forest Plans seeks to balance passive and active management. The Forest Service is limited in the amount of active management that is possible, given budget levels. Decisions on where wildfire will be managed for resource benefit will be based on many things, including potential effects to other resources and water quality.

498. **Concern Statement:** The Forest Service should suppress 100 percent of all wildfires and reinstate its policy of putting out all wildfires by 10am the day after the fire started.

    Response: Direction in the revised Forest Plans seeks to balance passive and active management. The Forest Service is limited in the amount of active management that is possible, given budget levels. Decisions on where wildfire will be managed for resource benefit will be based on many things, including potential effect to other resources and water quality. Wildfire suppression has been a major influence on current forest conditions leading to missed fire return intervals, heavier fuel, loading, and increased fire severity (see the "Wildland Fire Severity" section in the Final Environmental Impact Statement). The "Wildland Fire and Fuels Management" Environmental Consequences section also addresses the appropriate use of managed fire. The Forest Plans do not set policy such as the 10 a.m. rule.

Wildfire: Wildland Urban Interface

499. **Concern Statement:** The Forest Service should reconsider how it defines the wildland-urban interface. Commenters suggested both larger WUIs, for example up to 5 miles, and smaller wildland-urban interfaces, for example simply the structure ignition zone.

    Response: The definition of wildland-urban interface can be highly varied across the country. For the purposes of the Forest Plans, we have relied on community wildfire protection plans to address wildland-urban interface needs based on community input as well as allow for changes based on local changes. Community wildfire protection plans are collaboratively prepared by counties and local communities; as such, the boundaries as not determined by the Forest Service.

Wildlife

Wildlife: Bighorn Sheep - Domestic Grazing

500. **Concern Statement:** The Forest Service should consider prohibiting sheep grazing within 25 to 30 miles of suitable bighorn habitat, including potential habitat that is currently unoccupied, in order to allow bighorn populations to recover toward historical levels. It was suggested that sheep grazing should be completely eliminated because of the disease risk.

    Response: The alternatives are analyzed relative to risks to bighorn sheep from domestic sheep grazing allotments through a risk of contact tool. This tool estimates the probability of a foraying bighorn sheep contacting a domestic sheep grazing allotment, although contact between a bighorn sheep and a domestic sheep grazing allotment does not necessarily mean that contact will occur or disease-causing pathogens will be passed from domestic sheep to bighorn sheep. The process of modeling risk of contact represents the best available science for quantifying the risks posed by foraying bighorn sheep coming in contact with domestic sheep allotments. The results are provided in the Final Environmental Impact Statement. These results indicate low risks to bighorn sheep from current domestic sheep grazing allotments. Domestic sheep grazing allotments within 35 kilometers (about 22 miles) of bighorn sheep herds were analyzed using the risk of contact tool developed cooperatively by the Forest Service and Bureau of Land Management. The process of analyzing risk of contact is explained in O'Brien et al. 2014.

Results of this analysis were compared to a contact rate of 0.08 (or less than 0.8 contacts per decade), a threshold suggested by the Wild Sheep Working Group (Forest Service/BLM 2015) to limit disease outbreak intervals to a level that would likely result in bighorn sheep persistence in the long-term. The highest probability of contact between any bighorn sheep and a domestic sheep allotment in this analysis is 0.019, well below the 0.080 threshold. Domestic sheep allotments further than 35 kilometers from bighorn sheep herds were not analyzed because the extensive telemetry dataset from the Hells Canyon bighorn sheep meta-population shows that the large majority of summer and winter forays by bighorn rams and ewes are 35 kilometers or less.

501. **Concern Statement:** The Forest Service should drop range guideline (RNG-19) which entails moving sheep off allotments when bighorn sheep are found within 7 miles. A separation distance of 30 meters is effective.

    Response: The Forest Service is required to use the best available data and science to inform management decisions. The Forest Service places high value on the preponderance of peer-reviewed science that identifies respiratory diseases originating from domestic sheep and goats as the most important factor that led to the extirpation of wild sheep in most of their range, and continues to suppress population growth. The statement that "a separation distance of 30 meters is effective" is not supported by any credible research or observations by credible wildlife or veterinary professionals.

502. **Concern Statement:** The Forest Service should clarify how it determined the 7-mile separation distance between domestic sheep or goats and bighorn sheep. This distance should be biologically justified and determined through a quantitative risk assessment. High-risk areas should be identified and incorporated into the forest plans.

    Response: Reference to 7 miles in the bighorn sheep management standards does not appear in the Final Environmental Impact Statement. The origin of the 7-mile criteria comes from former plan revision team member Earl "Duke" Klein regarding a risk analysis conducted by the Payette National Forest. Klein suggested that one option for the Forest Plan revision is to use the "Payette National Forest information regarding 'foray' distance from core herd ranges and use the 11 kilometer distance or 50 percent probability of no contact between domestic sheep and wild sheep." There is no peer reviewed literature that uses 7 miles as a component of effective separation between domestic sheep and bighorn sheep, but the 11-kilometer distance discussed by Klein is equal to approximately 7 miles (11.27 km).

503. **Concern Statement:** The Forest Service should create a standard requiring a formal response plan for allotments with sheep or goat grazing. Such plans should be incorporated into the annual operating instructions and should account for retrieval and disposition of stray domestic sheep.

    Response: There is no formal emergency response or action plan specifically required in the management direction, but some components that would be expected in such a plan are covered in BHSM-3S, BHSM-4S, and BHSM-5S. Additionally, management actions that contribute to effective separation are matters of administering the domestic sheep grazing permits, and will be addressed in annual operating instructions.

504. **Concern Statement:** The Forest Service should change Range Guidelines 13 (trailing of domestic sheep or goats) and 19 (separation of domestic and bighorn sheep) to standards and require compliance monitoring. The Forest Service should also develop standards to

address: (1) diseased domestic sheep, and (2) stocking of domestic sheep and goats on allotments where it doesn't currently occur.

Response: RNG G-13 and 19 do not appear in the Final Forest Plans; however, the concern with trailing domestic sheep near bighorn sheep is addressed in BHSM-1S and the intent from RNG G-19 is included in BHSM-5S. The Final Forest Plans contain five standards that address bighorn sheep, and no guidelines. The intent was to take the multiple standards and guidelines in the Draft Environmental Impact Statement and condense them into more concise standards without losing the original intent. There are not additional standards that address diseased domestic sheep or stocking of domestic sheep or goats, because these are matters of grazing permit administration, and will be addressed in annual operating instructions. Regarding "stocking of domestic sheep and goats on allotments where it doesn't currently occur," the Final Environmental Impact Statement identifies the portions of each National Forest that are suitable for domestic sheep grazing, and which portions are unsuitable for domestic sheep grazing. Additionally, BHSM-1S and BHSM-2S do not allow the authorization of domestic sheep or goat grazing where effective separation from bighorn sheep cannot be reasonably maintained.

505. **Concern Statement:** The Forest Service should allow for grazing by domestic sheep and include the opportunity for permittees to relocate to vacant allotments or create voluntary exchange opportunities with neighboring allotments.

    Response: Permitted grazing by domestic sheep is continued in the revised Forest Plans. Appendix F of the Final Environmental Impact Statement contains the acreages for each National Forest that are suitable for grazing by domestic sheep.

506. **Concern Statement:** The Forest Service should define "effective separation" in Range Standard 9, "source habitat" in Range Standard 10, "adjacent or nearby" in Range Standards 11 and 12, "effective monitoring" in Range Standards 12 and 14, "reasonable effort" in Range Standard 15, and "at a distance" in Range Standard 17. Typical animal identification approaches including ear tags and paint branding should be acceptable for identifying animals "at a distance."

    Response: Some of these terms and phrases are not included in the Final Forest Plans. Further explanation of "effective separation" is provided as a footnote to the management standards, and is also in the glossary.

507. **Concern Statement:** The Forest Service should not prohibit grazing by domestic sheep or goats if the State fails to effectively monitor for bighorn sheep.

    Response: Standard BHSM-1S prohibits the authorization of domestic sheep or goat grazing where effective separation cannot be reasonably maintained. Monitoring can be a component of effective separation. There is not a direct connection between whether the Forest Service authorizes grazing by domestic sheep and the State's routine monitoring of bighorn sheep populations. The Forest Service and State wildlife agencies coordinate on matters that are pertinent to authorized livestock grazing and bighorn sheep conservation.

508. **Concern Statement:** The Forest Service should require effective monitoring before turn out of domestic sheep or goats. In addition, Forest Service staff should count sheep and goats rather than the permittee.

Response: See the response to the previous comment. In addition, these Forest Plans do not require Forest Service staff to count domestic sheep to confirm the number of sheep being placed on allotments.

509. **Concern Statement:** The Forest Service should consider challenges faced by other national forests related to domestic sheep grazing and bighorn recovery.

Response: Standard BHSM-1S prohibits the authorization of domestic sheep or goat grazing where effective separation cannot be reasonably maintained. The management direction regarding bighorn sheep was developed from peer-reviewed science and from the experiences of other land management agencies throughout the range of bighorn sheep.

510. **Concern Statement:** The Forest Service should provide maps that delineate all known bighorn herds, potential bighorn habitat, areas unsuitable for grazing, and locations of domestic sheep allotments, by alternative.

Response: Maps of these landscape features were not in the Draft Environmental Impact Statement. Maps of the areas identified as unsuitable for domestic sheep grazing are provided in the Final Environmental Impact Statement. Maps of the bighorn sheep herds can be found in the Application of the Bighorn Sheep Risk of Contact Model on the Blue Mountains National Forests, Final Report (2016). Maps of "potential bighorn habitat" are not specifically provided, but "source habitat" is shown.

Wildlife: Bighorn Sheep - Packgoats

511. **Concern Statement:** The Forest Service should allow packgoat use by recreationists but limit the potential for disease transmission from goats to bighorn sheep. Packgoats allow recreationists who can still hike but no longer carry much gear to access remote areas. The Forest Service should allow packgoat use by, for example, required tethering or penning, "certification," required permits, or the owner's presence.

Response: The revised Forest Plans do not restrict the use of pack goats within the planning area, except for those uses requiring a special use permit or other form of authorization. Standard RNG-10 S-3 has been removed. Standard BHSM-2S prohibits the authorizing of pack goat use where effective separation from bighorn sheep cannot be reasonably maintained. Regarding "certified pack goats," a veterinary test that is available, reliable, and affordable does not currently exist. This option will be considered as the science develops.

512. **Concern Statement:** The best available science should be used to determine what size buffer is needed between pack goats and bighorn sheep to prevent disease transmission.

Response: As mentioned above, the revised Forest Plans do not restrict the use of pack goats within the planning area, except for those uses requiring a special use permit or other form of authorization. Standard RNG-10 S-3 has been removed. Where authorization of pack goat use is involved, effective separation from bighorn sheep will be the goal. Effective separation is not limited to a simple avoidance buffer, but considers distance, bighorn sheep herd demographic data, permeability of the landscape, and other factors that influence how bighorn sheep move within the landscape. Focusing on effective separation rather than a buffer is consistent with the best available science.

513. **Concern Statement:** The Forest Service should not assume science assessing the potential for spread of disease between domestic sheep and bighorn sheep is relevant to

goats, and particularly packgoats. Packgoats stay close to owners and are often vaccinated. There are very few packgoat users, and many causes have led to the decline in the bighorn sheep populations. The Forest Service should indicate the uncertainty in its conclusions about the risk of maintaining packgoat access.

Response: As mentioned above, the revised Forest Plans do not restrict the use of pack goats within the planning area, except for those uses requiring a special use permit or other form of authorization. Standard RNG-10 S-3 has been removed. The Final Environmental Impact Statement and management standards acknowledge differences between pack goats and domestic goats used for other purposes. There is also recognition that pack goats likely represent lesser risks to bighorn sheep than domestic sheep or larger herds of goats used for weed control.

514. **Concern Statement:** The Forest Service should analyze the social and economic impacts of prohibiting packgoat access.

Response: As mentioned above, the revised forest plans do not restrict the use of pack goats within the planning area, except for those uses requiring a special use permit or other form of authorization. Standard RNG-10 S-3 has been removed.

Wildlife: Bighorn Sheep Analysis and Habitat Management

515. **Concern Statement:** The Forest Service should more completely analyze impacts to bighorn sheep populations including those from: bighorn hunting, stress of captivity and handling, wolves, invasive weeds, and grazing. The Forest Service should consider science that suggests little risk of disease transmission from domestic cattle, sheep and goats to bighorn sheep. In addition, the Forest Service should consider disease transmission to bighorns from humans, cattle, birds, elk, and other wildlife.

Response: The state of knowledge on what pathogens are involved in bighorn sheep die-offs has advanced well beyond what was understood in 2003 when Weiser et al. published the paper "Characterization of *Pasteurella multocida* Associated with *Pheumonia* in Bighorn Sheep" in the Journal of Wildlife Diseases (39 (3) pages 536-544). Additionally, Weiser's paper does not state "a number of animal species, especially birds" represent a risk of pathogen transmission to bighorn sheep. Weiser documents the bacterial complex that was isolated from bighorn sheep in Hells Canyon. Their focus was on the prevalence and variety of *Pasteurella multocida* subspecies, variants, and antigenic variation that were identified in the bighorn sheep sampled. Although *Mycoplasma ovipneumonia* was known when Weiser conducted his work, it had yet to be considered an important pre-cursor to other bacteria that can result in sickness and mortality in bighorn sheep. Weiser's paper mentions "mycoplasmal infection" only once as one of many factors associated with reduced physical and immunologic defenses in bighorn sheep.

The Wolfe et al. (2010) paper documents several pathogens that were isolated from the carcasses of bighorn sheep and syntopic domestic cattle. We have considered the findings of this paper. The circumstances documented in the Wolfe paper are uncommon, and resulted in cattle and bighorn sheep concentrating together during a severe winter period. Another consideration is that the social attraction between these two species does not exists as with domestic sheep or goats and bighorn sheep. Although our managers will remain vigilant regarding unique circumstances that could concentrate cattle and bighorn sheep, Forest Plan direction is not designed to specifically address such unique circumstances.

We have conducted an extensive review of the peer-reviewed literature regarding sources of pathogens that are harmful to bighorn sheep. There is little evidence that supports the notion that "disease transmission to bighorns from humans, cattle, birds, elk, and other wildlife" is worthy of further consideration. The large preponderance of scientific literature identifies domestic sheep, and to a lesser extent domestic goats as the primary sources of pathogens that are detrimental to bighorn sheep. We will continually review and consider research that may implicate other sources of pathogens, and will adjust management in response to new, pertinent information.

516. **Concern Statement:** The Forest Service should not use data from the Payette National Forest for its bighorn analysis. Viability analysis should include information regarding the risk of extirpation and should be modeled like all other focal species.

    Response: The bighorn sheep populations within the Blue Mountains Planning Area include the Hells Canyon complex, which are the same populations involved in the Payette National Forest's Supplemental Environmental Impact Statement that addresses bighorn sheep viability. The bighorn sheep location data for the Hells Canyon complex are the same used in the Payette's analysis and in the Blue Mountains environmental analysis. Therefore, it is not only appropriate for the Blue Mountains Forest Plans to use these data, but it is required by our mandate to use the best available data and science on which to base management decisions. There are no other data that could inform a risk of contact analysis except for the location data collected from the Hells Canyon bighorn sheep population. One difference between the Payette's analysis and these revised Forest Plans is that the risk of contact analysis conducted for the Blue Mountains Final Environmental Impact Statement used a more complete and recent dataset, including location data through 2015.

    The Blue Mountains analysis does not rely on or cite the two documents that were the focus of the lawsuit by the Idaho Wool Growers Association and North American Packgoat Association vs. Thomas Vilsack (Dept. of Agriculture) and Thomas Tidwell (US Forest Service), Case No. 1:08-cv-00394-BLW.

517. **Concern Statement:** The Forest Service should reestablish the Canyon Mountain herd.

    Response: The Forest Service administers habitat for bighorn sheep, and does not directly manage populations of bighorn sheep. The Oregon Department of Fish and Wildlife has management authority over wildlife populations in the state of Oregon. The priorities for the restoration and conservation of bighorn sheep are detailed in "Oregon's Bighorn Sheep and Rocky Mountain Goat Management Plan" (2003). The Oregon Department of Fish and Wildlife has determined that Canyon Mountain is too close to sources of potential disease that would make bighorn sheep establishment unfeasible. An earlier attempt to establish bighorn sheep on Canyon Mountain failed due to disease. The potential disease vectors in the vicinity of Canyon Mountain are not associated with permitted grazing on National Forest System lands.

Wildlife: Climate Change

518. **Concern Statement:** The Forest Service should analyze how anticipated changes in climate will impact focal wildlife species and their habitats as well as the combined effects of its alternatives and climate change on wildlife.

    Response: Climate change and its effect on surrogate (focal) species are discussed within the "Surrogate Species" section of the Final Environmental Impact Statement.

519. **Concern Statement:** The Forest Service should incorporate management areas and standards to conserve species and habitats threatened by climate change.

    Response: Rather than using management areas and standards to conserve species and habitats, the Forest Plans rely on desired conditions for vegetation to guide management toward a landscape that will be more resilient in the face of climate change and thus provide habitat for species threatened by climate change.

Wildlife: Coordination with States

520. **Concern Statement:** The Forest Service should integrate State wildlife management plans and the Oregon Conservation Strategy into the Forest Plans. In addition, the Forest Service should consider using Centralized Oregon Mapping Products and Analysis Support System (COMPASS) for spatial fish and wildlife data.

    Response: State management plans and the Oregon Conservation Strategy were considered where appropriate. Many of the species of conservation concern that were considered in the surrogate species viability analysis are also Oregon Strategy species. The Forest Service does not use COMPASS at this time.

Wildlife: Deer and Elk Habitat

521. **Concern Statement:** The Forest Service should create more big game forage habitat, including through the use of regeneration harvests. Elk prefer open areas because of the growing presence of wolves. The Forest Service should clarify the need for high cover and no roads as elk are often found in agricultural areas and other places with roads.

    Response: There is an extensive body of evidence documenting that elk select habitat based on a combination of factors including forage, cover, disturbance, and predation risk. The Forest Plans do not have standards and guidelines for cover or forage but instead rely on the desired conditions for vegetation to provide elk habitat at the landscape scale. In addition, fine scale components of elk habitat will be considered at the project scale. In response to comments from the public, Tribes, and State agencies, the Forest Plans have identified elk priority areas where road-related disturbance will be reduced to encourage elk to remain on public, rather than private land.

522. C**oncern Statement:** The Forest Service should reduce cattle grazing to improve forage for elk.

    Response: The level of cattle grazing varies by alternative. Impacts to elk from each alternative, including grazing management, are discussed within the “Elk” section of the Final Environmental Impact Statement.

523. **Concern Statement:** The Forest Service should not use elk as an indicator species and should address the potential need to limit elk populations as unrestrained growth can damage riparian areas and other habitats. The Forest Service should request that State agencies bring elk populations within desired levels where populations exceed them.

    Response: The Forest Service selected elk as a focal species for the new Forest Plans due to the economic and cultural significance of this species. Federal land management agencies and the State wildlife agencies share legal co-trustee responsibility for the management of wildlife. The Forest Service continues to work closely and cooperatively with both the Oregon Department of Fish and Wildlife and Washington Department of Fish and Wildlife for the management of elk populations and habitat. Elk populations

are not in jeopardy of declining in the near future. The primary concern regarding elk is poor distribution driven in part by road-related disturbance on public lands that is causing elk to shift their habitat use to private lands.

524. **Concern Statement:** The Forest Service should not close motor vehicle use in elk winter habitat, as proposed in the WLD-HAB-13 guideline, because it would complicate timber harvest and winter logging.

    Response: As in the previous Forest Plan, waivers to winter range road closures to conduct logging operations would be considered on a site-specific basis in coordination with the district wildlife biologist.

525. **Concern Statement:** The Forest Service should incorporate standards and guidelines to support development of habitat for deer and elk, including protection of bitterbrush.

    Response: The desired condition for plant species composition states "the mix of species in the grass and shrub layer of forests, as well as shrubland and grassland vegetation, contain a diverse array of native species distributed across the landscape reflecting historical conditions." Habitat conditions for deer and elk will benefit from achieving the desired conditions for vegetation. Management for specific plant species, such as bitterbrush, may occur at the project level.

526. **Concern Statement:** The Forest Service should leave wildlife management to the State agencies who have jurisdiction.

    Response: Federal land management agencies and the state wildlife agencies share legal co-trustee responsibility for the protection and management of wildlife. The Forest Service continues to work closely and cooperatively with both the Oregon Department of Fish and Wildlife (ODFW) and Washington Department of Fish and Wildlife (WDFW) for the conservation and management of wildlife resources, including habitat, within the Malheur, Umatilla, and Wallowa-Whitman National Forests. In addition, the National Forest Management Act and the Forest Service Manual require that the Forests manage for viable populations of native species.

527. **Concern Statement:** The Forest Service should consider how management activities will affect elk and mule deer populations on neighboring lands.

    Response: This has been thoroughly considered and addressed. Please see the "Elk" section in the Forest Plans and the Final Environmental Impact Statement.

Wildlife: Habitat Connectivity

528. **Concern Statement:** The Forest Service should not include habitat corridors in the forest plans as these areas should be managed to reduce fire risk and uncharacteristic conditions. Habitat connectivity can be provided in other ways.

    Response: Habitat corridors are not included in the preferred alternative.

529. **Concern Statement:** The Forest Service should build wildlife passage over interstates and other major roads to facilitate wildlife migration.

    Response: Wildlife passage structures were not considered in the forest plan revision. The Forest Plans do not authorize site-specific actions; site-specific proposals require project-level analysis that is completed in compliance with the National Environmental Policy Act, including opportunities for public participation.

The revised Forest Plans do support and promote wildlife habitat, habitat connectivity, and wildlife migration through specific plan components. Desired Conditions for Goal 1.2 – Species Diversity recognizes that species habitat retains adequate quality, distribution, and abundance to provide for viable populations including the ability to interact, disperse, and find security within habitats in the Planning Area. Additionally, Goal 1.12 – Landscape Patterns, emphasizes that landscape patterns provide connectivity, facilitating the movement of wildlife across the landscape.

530. **Concern Statement:** The Forest Service should evaluate habitat connectivity using landscape ecology metrics.

    Response: See the "Wildlife Habitat Connectivity" section in the "Terrestrial Wildlife Species" section of the Final Environmental Impact Statement for discussion on connectivity.

Wildlife: Management Indicator and Focal Species

531. **Concern Statement:** The Forest Service should standardize management indicator species, analysis methodologies, and metrics across alternatives so the difference in effects on wildlife species can be compared. Rather than ranking alternatives, the Forest Service should show how much difference there is between alternatives for species viability. The Forest Service should improve the cumulative effects analysis for wildlife by incorporating an assessment of how each alternative affects regional wildlife populations. Inclusion of wildlife population numbers in each management area was suggested for comparison reasons.

    Response: Actual population numbers are not available for most species within the Planning Area. The surrogate species analysis includes the management indicator and focal species with the exception of deer and elk because their populations are controlled primarily by hunter harvest. The surrogate species viability analysis does display the relative differences in species viability between alternatives.

532. **Concern Statement:** The Forest Service should establish population trends and objectives for management indicator species per the 1982 Planning Rule requirements in 36 CFR Section 219.19.

    Response: The Forest Plans have objectives and monitoring for focal species. The focal species selected to meet the monitoring requirements of the 2012 Planning Rule are the same species that were selected as Management Indicator Species to meet the requirements of the 1982 Planning Rule. Population trends are not available for many species in the Planning Area so habitat quantity and quality will be monitored as a proxy.

533. **Concern Statement:** The Forest Service should clarify how focal species and management indicator species were selected and how they are used to guide desired conditions and management activities. Conservation strategies for focal species should be included.

    Response: Surrogate species (which were called focal species in the Draft Environmental Impact Statement) were selected based on the methods in Gaines (2017) located in the project record and summarized in the Final Environmental Impact Statement Surrogate Species section in Volume 2. Management Indicator Species were selected because their population changes are believed to indicate the effects of management activities. More explanation on the rationale for selecting Management

Indicator Species can be found in the project record. The Forest Plans identify habitat objectives for Management Indicator Species.

534. **Concern Statement:** The Forest Service should not use the concept of focal species because it has no scientific validity. Nor should it plan for species of concern as it has no authority for this and the category is very broad.

    Response: The National Forest Management Act requires us to manage for viable populations of all native wildlife species, including species of concern. Surrogate species were referred to as focal species in the draft Plan and Environmental Impact Statement. The name was changed to surrogate species to avoid confusion with the definition of focal species that is used in the 2012 Planning Rule. Discussion on the validity of the surrogate (focal) species concept is located within the Surrogate Species section of Volume 2 in the Final Environmental Impact Statement and the planning record. The use of the surrogate species approach (Lambeck 1997) is a credible and scientifically rigorous method to assess ecosystem conditions that contribute to the viability of wildlife species. The long-term sustainability of a surrogate species is assumed to be representative of a group of species with similar ecological requirements, and this group is assumed to respond in a similar manner to environmental change (Suring et al. 2011). The final Forest Plans do not use the term species of concern.

535. **Concern Statement:** The Forest Service should include a broader range of management indicator species. The species selected do not adequately represent all species that may be affected by management and are skewed towards species that prefer open areas. Recommendations include all management indicator species from the 1990 plans, threatened and endangered species, sensitive species, keystone species, and rare species.

    Response: The complete list of species considered and the rationale for those selected and not selected is available in the planning record.

536. **Concern Statement:** Specific management indicator species recommendations include: bighorn sheep, sage grouse, wolf, wolverine, marten, fisher, bald eagle, boreal owl, bats, neotropical songbirds, white-headed woodpecker, Lewis' woodpecker, black-backed woodpecker, three-toed woodpecker, upland sandpiper, ash-throated flycatcher, pinyon jay, northern harrier, short-eared owl, red-naped sapsucker, MacGillivray's or Wilson's warbler, black-crowned night heron, greater blue heron, harlequin duck, bufflehead or wood duck, Columbia spotted frog, painted turtle, marsh wren, sandhill crane, and northern goshawk.

    Response: The complete list of species considered and the rationale for those selected and not selected is available in the planning record.

537. **Concern Statement:** Rocky Mountain elk and mule deer should be designated management indicator species. Others suggested elk should not be an indicator because of their abundant populations.

    Response: Rocky Mountain elk and mule deer were designated as a focal species because they have great cultural and economic significance in the planning area and because their distribution is greatly impacted by Forest Service management. The primary issue with elk is not low populations, but poor distribution. It is well documented that elk spend a disproportionate amount of time on private land in response to road-related disturbance on public land.

538. **Concern Statement:** The Forest Service should protect more habitat for marten.

Response: The American marten is a surrogate species and effects from alternatives are discussed within the "Surrogate Species" section of the Final Environmental Impact Statement.

539. **Concern Statement:** The Forest Service should protect more pileated woodpecker habitat and should not reduce habitat below the historic range of variability.

Response: The pileated woodpecker is a surrogate species and effects from alternatives are discussed within the "Surrogate Species" section of the Final Environmental Impact Statement. In addition, the pileated woodpecker is a focal species and will be monitored throughout the life of the Plans.

540. **Concern Statement:** The Forest Service should revisit its assessment for white-headed woodpecker as the loss of large trees and snags from logging will likely lead to a declining population trend.

Response: The white-headed woodpecker is a surrogate species and effects from the alternatives are discussed within the "Surrogate Species" section of the Final Environmental Impact Statement. In addition, the white-headed woodpecker is a focal species and will be monitored throughout the life of the plan.

Wildlife: Monitoring

541. **Concern Statement:** The Forest Service should incorporate a standard that requires a robust monitoring and evaluation plan to counter the loss of standards and guidelines for fish and wildlife.

Response: Focal species and other species with a concern for viability have monitoring objectives identified in the monitoring section of the Forest Plans.

542. **Concern Statement:** The Forest Service should develop standards related to monitoring plans for indicator species. The Forest Service should clarify how it will monitor the status and trend of selected focal species.

Response: Focal species (formerly management indicator species) have monitoring objectives that are identified in the monitoring section of the Forest Plans.

Wildlife: Other Species

543. **Concern Statement:** The Forest Service should incorporate standards and guidelines to prevent impacts to neotropical migratory and sensitive native birds.

Response: There is a standard that minimizes impacts to all nesting birds (SD-1G): "To the extent practical, known cavity or nest trees should be preserved when conducting prescribed (planned ignition) burning activities, mechanical fuel treatments, and silvicultural treatments to protect the integrity of the nest site."

544. **Concern Statement:** The Forest Service should consider cougar and porcupine habitat needs as well as viability of northern goshawk and other forest raptors such as the sharp-shinned hawk, peregrine falcon, and flammulated owl.

Response: The Forest Plans do not analyze impacts to each species that occurs within the Blue Mountains but instead rely on a surrogate species approach that analyzes impacts to groups of species. See the "Surrogate Species" section of the Final Environmental Impact Statement for more information.

545. **Concern Statement:** The Forest Service should not support growth of beaver populations as beaver are not a viable option for watershed restoration. Others recommended clear goals, standards and guidelines and a timeline for beaver reintroduction.

    Response: The National Forest Management Act and the Forest Service Manual require that the Forest Service manage for viable populations of native species. There are no beaver reintroductions proposed in the Forest Plans. Beaver reintroduction would have to be coordinated with State wildlife management agencies and would require site-specific analysis. Managing grazing and riparian management toward desired conditions and other plan direction for riparian areas would promote recovery of beaver habitat, which would allow beaver to recolonize suitable habitat.

Wildlife: Roads

546. **Concern Statement:** The Forest Service should have road densities of less than 2 miles per square mile in both elk and deer habitat.

    Response: This concern was addressed between the Draft and Final Environmental Impact Statements. The Forest Plans have identified elk priority areas. Across approximately 30 percent of MA 4, road-related disturbance will be reduced to within the desired condition for elk. See the "Elk" section of the Forest Plans for more information.

547. **Concern Statement:** The Forest Service should not close roads to provide elk security, when factors other than roads affect elk populations, including hunting pressures, summer forage conditions, and predators. Cross-country travel restrictions in winter range, calving and hunting areas may be sufficient. Research from Starkey is flawed and should not be used.

    Response: The "Elk" sections within the Forest Plans and the Final Environmental Impact Statement discuss the many factors that influence elk populations including forage, predators, and hunting pressure. The Forest Service does not manage predator populations or hunting pressure, but is responsible for the management of the road system on the National Forests. A large body of literature supports the assertion that disturbance associated with open roads influences elk distribution.

548. **Concern Statement:** The Forest Service should not close roads because this would limit access for managers and hunters. Instead, roads could be gated.

    Response: The Forest Plans do not close routes, trails, or areas open to motor-vehicle uses. Decisions regarding closing or gating roads will be done at the project level.

549. **Concern Statement:** The Forest Service should not have a low road density of 1.5 miles per square mile for winter elk habitat because snow naturally limits vehicle use at high elevations during the time elk are most vulnerable.

    Response: Standard RME-2G addresses elk winter range. It states that motor vehicle use on designated routes and open routes should not be authorized within elk winter range between December 1 and April 14. Federal and State highways and major forest roads (such as arterials) are exempt to provide reasonable public access. The intent is to minimize disturbance to elk while occupying winter range and encourage elk use of public land.

Wildlife: Sage Grouse Habitat and Management

550. **Concern Statement:** The Forest Service should manage sage-grouse habitat consistent with the BLM's strategy.

     Response: Much of the sage grouse direction in this Forest Plans is consistent with Forest Service sage-grouse plans. The national plans were developed in collaboration with the Bureau of Land Management.

551. **Concern Statement:** The Forest Service should include standards and guidelines for sage-grouse in the forest plans.

     Response: Sage grouse standards and guidelines can be found in Appendix B of the Forest Plans.

552. **Concern Statement:** The Forest Service should not preferentially rehabilitate sage-grouse habitat after a wildfire and should allow seeding with non-native plant species and use of livestock to establish desired species. In addition, the Forest Service should modify the guideline making sage grouse habitat a priority for protection from fire (FIRE-4) to make human safety and property higher priorities.

     Response: Sage-grouse habitat receives special consideration during fire suppression efforts as part of a strategy to maintain a viable population and prevent an endangered species listing. Human safety is always the number one priority in fire suppression tactics.

553. **Concern Statement:** The Forest Service should not set policy for managing private lands within and adjacent to core sage-grouse habitat.

     Response: The Forest Service does not set policy on private lands.

Wildlife: Species Viability

554. **Concern Statement:** The Forest Service should not assume that managing for historical range of variability assures species viability, as required by the National Forest Management Act regulations, and should clarify how it determined that 40 percent of the historical level of habitat is acceptable. The Forest Service should protect species viability to the greatest extent possible.

     Response: Several general overriding assumptions are used throughout this assessment. A key assumption is that managing for the historical range of variability across ecosystems will result in a higher likelihood of maintaining viability for most species. If management activities can produce conditions close to or within the historical range of variability, species that are adapted to these conditions will have a stronger likelihood of persistence (Aplet and Keeton 1999, Landres et al. 1999, Swanson et al. 1994). Use of historical range of variability relies on two concepts: that past conditions and processes provide context and guidance for managing ecological systems today and that disturbance-driven spatial and temporal variability is a vital attribute of nearly all ecological systems. Approximating historical conditions for source habitats provide a management strategy likely to sustain diverse surrogate species, even for those species where little information is available (Hunter et al. 1988; Landres et al. 1999; Swanson et al. 1994). Similarly, because of limited understanding about ecosystems, approximating past conditions offers one of the best means for predicting and reducing impacts to current ecosystems (Kaufmann et al. 1994). Therefore, if the amount and structure of source habitats are within the historical range of variability, associated wildlife species

will have a greater likelihood of sustainability than if the amount and structure of source habitats are outside the historical range of variability (Raphael et al. 2001; Spies et al. 2006).

Several authors (Rompré et al. 2010, Svancara et al. 2005, With and Crist 1995, Tear et al. 2005) have indicated that landscapes containing at least 40 percent of source habitat for a species should sustain that species over time. King and Worth (2002) point out that dispersal success is usually not a concern when habitat exceeds 40 percent of the landscape.

555. **Concern Statement:** The Forest Service needs population data to assess species viability.

Response: By using a hierarchical evaluation of species, groups, and families, the analysis process addresses single- and multi-species needs as well as identifying broad-scale patterns of habitat change, as did Wisdom et al. (2000).

Within the planning area, 175 species were identified as having some level of local and/or regional concern. These 175 species were evaluated and 38 species representing 26 families or groups based on similarity of habitat use were selected for assessment. In selecting 38 species for more detailed analysis, the concept of surrogate species (Lambeck 1997) was applied and the findings of Wisdom et al. (2000) were consulted. Terrestrial species were grouped by habitat associations; risks and threats were identified for the group, and a representative species (surrogate species) was selected for the group. The groupings are based on the terrestrial families in the Forest Service Pacific Northwest Region (Region 6) terrestrial assessment (USDA Forest Service 2010). The use of terrestrial families may have tenuous value when applied to a small area like a subbasin, but when applied to large landscapes it can be an effective analysis tool (Raphael et al. 2001, USDA and USDI 2000).

556. **Concern Statement:** The Forest Service should not consider species viability or prioritize wildlife populations in the Forest Plans.

Response: The implementing regulations (36 CFR 219.19) for the National Forest Management Act of 1976 (NFMA) call for providing viable populations of native and desired nonnative wildlife.

557. **Concern Statement:** The Forest Service should clarify the description of viability outcomes, for example by integrating the factor analyses.

Response: A more detailed description of the viability analysis (Gaines et al. 2017) is in the planning record.

558. **Concern Statement:** The Forest Service should use more extensive data to assess viability for boreal owl, water vole, and Canada lynx. The Forest Service should expand monitoring to track Cassin's finch viability.

Response: Analysis indicates that at the broad scale, habitat for the lynx is being maintained or moved towards the historical range of variability. In addition, the Blue Mountains are considered unoccupied by resident lynx and a change in suitable habitat on the fringe of lynx range would not be expected to have any impact on the lynx population. Trends in source habitat for the Boreal Owl and Cassin's Finch will be monitored under the new Forest Plans.

The viability modeling indicated that there is a low level of concern for the water vole under all alternatives for the life of the plan. The assumption is that those species with a moderate or low level of concern have minimal risk of becoming nonviable during the life of the plan. A more detailed analysis for these species (Wales et al. 2011) is in the planning record.

559. **Concern Statement:** The Forest Service should focus more on species that require cool and moist forest with large tree structure, decadence, and large blocks of interior forest habitat.

    Response: The pileated woodpecker was selected as the surrogate species to represent species that use cool moist forest with large trees. Providing adequate amounts and distribution of habitat and managing risks for pileated woodpeckers is assumed to provide the ecological conditions needed to maintain viability of other species associated with cool moist forest with large trees.

560. **Concern Statement:** The Forest Service should develop plan components including goals, objectives, and standards and guidelines to ensure viable populations of native wildlife.

    Response: A key assumption of the wildlife analysis is that managing for the historical range of variability across ecosystems will result in maintaining viability for most species. The viability modeling indicated that there is a low level of concern for most species that were analyzed. Species for which the viability models predict a high level of concern have additional objectives and monitoring to allow for adaptive management throughout the life of the plan. Standards and guidelines were developed in cases where other plan direction, such as desired conditions, is insufficient to meet the needs of a species.

Wildlife: Standards and Guidelines

561. **Concern Statement:** The Forest Service should remove standard STA EXP-4 that would only allow vehicle access on designated routes in the Starkey Experimental Forest and Range.

    Response: Starkey Experimental Forest and Range is a research area and standards and guidelines are related to research objectives.

562. **Concern Statement:** The Forest Service should dramatically enhance protections for wildlife by adopting standards that:

    - protect wildlife dispersal (G-1);
    - protect late old structure, riparian corridors, and forested habitat corridors within old moist and cold forests (G-2, G-3, S-4);
    - manage for as much old forest structure as possible (S-5);
    - protect goshawk nests (G-10);
    - establish goshawk post-fledging family areas (WLD-HAB-8) and home ranges management areas (WLD-HAB-9);
    - support 3 reproductive pairs of pileated woodpeckers per watershed (WLD-HAB-11);

- survey potential bat sites before potentially disturbing activities (WLD-HAB-23); and
- survey goshawk habitat (WLD-HAB-24)

Response: The new forest plans rely primarily on desired conditions to maintain habitat for a diversity of species. There are no standards or guidelines pertaining to wildlife dispersal or habitat corridors, but see the desired condition for 1.12 Landscape Patterns, which discusses providing connectivity to facilitate the movement of wildlife across the landscape. There are many standards and guidelines pertaining to old forest and riparian areas (see 1.1 Watershed Function and 1.14 Old Forest). Goshawk nests will be protected by SD-1G: "To the extent practical, known cavity or nest trees should be preserved when conducting prescribed (planned ignition) burning activities, mechanical fuel treatments, and silvicultural treatments to protect the integrity of the nest site." There are no standards or guidelines pertaining to goshawk post-fledging areas or pileated woodpeckers. There are no requirements to survey for potential bat sites; however, there is a standard to protect bat roost and maternity sites.

563. **Concern Statement:** The Forest Service should enhance protections for wildlife by changing all species diversity guidelines into standards.

Response: In order to provide protection of resources, projects must follow all guidelines. Guidelines are an important component of plan direction, allowing some flexibility (with proper documentation) while still providing guidance to protect resources. Guidelines are commitments that national forest managers will follow during plan implementation. The project analysis will document how the project is meeting the intent of every guideline.

564. **Concern Statement:** The Forest Service should specify whether species diversity standards and guidelines apply to utility construction and right-of-way activities.

Response: The Forest Plans specify whether standards and guidelines apply across the national forest or only to specific management areas.

Wildlife: Threatened, Endangered and Sensitive Species

565. **Concern Statement:** The Forest Service should have separate standards and guidelines for federally listed species and sensitive species. In addition, the Forest Service should only include broad statements about complying with the Endangered Species Act rather than prescriptive requirements because it is a programmatic document.

Response: The biological assessment presents the species conservation measures used to protect listed species and species conservation measures have been incorporated into Plan direction. In some cases, a standard or guideline may apply to both listed and sensitive species.

566. **Concern Statement:** The Forest Service should include standards and guidelines for the conservation and recovery of listed species and should incorporate management guidance aligned with conservation strategies and recovery plans for listed species.

Response: The biological assessment presents the species conservation measures used to protect listed species. The interdisciplinary team did an additional review between the draft and final Plans to verify that the conservation measures are represented within Plan direction. During Plan implementation, each project includes a biological assessment that addresses how conservation measures are addressed for the specific project.

Conservation strategies and recovery plans for listed species were considered during the development of the Forest Plans.

567. **Concern Statement:** The Forest Service should eliminate the overly broad category of sensitive species and focus on managing for resilient habitats. The effect of sensitive species designation should be considered.

Response: The purpose of the sensitive species designation is to prevent a species from becoming threatened or endangered. Sensitive species direction is taken directly from Forest Service Manual Chapter 2670. Sensitive species are selected from (1) Fish and Wildlife Service or National Marine Fisheries Service candidates for Federal listing (categories 1 and 2) under Federal Register Notice of Review, (2) State lists of endangered, threatened, rare, endemic, unique, or vanishing species, especially those listed as threatened under State law, or (3) other sources as appropriate in order to focus conservation management strategies and to avert the need for Federal or State listing as a result of national forest management activities.

Wildlife: Wolf Management

568. **Concern Statement:** The Forest Service should correct inaccurate statements in the Draft Environmental Impact Statement including that wolves are displaced from habitat by humans, challenged by population isolation, require fewer roads, and that most wolf mortality in the distinct population segment has been in response to livestock depredations.

Response: Several researchers have documented the effects of roads and other human activities on wolves (Thiel 1985, Mech 1989, Carroll 2003, Carroll et al. 2006, Larsen and Ripple 2006).

In the time period from 2011-2016 there were 19 wolf mortalities documented by Oregon Department of Fish and Wildlife. Of those, one wolf (5 percent) died from poison, two (11 percent) died from parvo, five (26 percent) died from poaching, seven (37 percent) died from lethal removal in response to livestock depredations, and four (21 percent) died from unknown causes.

569. **Concern Statement:** The Forest Service should not manage for wolves because it's not their job and the wolves are doing fine on their own. Wolves are negatively impacting local ranchers, hunting and tourism.

Response: The National Forest Management Act and the Forest Service Manual require that the Forest Service manage for viable populations of native species.

Appendix D: Wild and Scenic Rivers

Introduction

Congress enacted the Wild and Scenic Rivers Act in 1968 to preserve select river's free-flowing condition, water quality and outstandingly remarkable values. The most important provision of the Act is protecting rivers from the harmful effects of water resources projects. To protect free-flowing character the Federal Energy Regulatory Commission (which licenses nonfederal hydropower projects) is not allowed to license construction of dams, water conduits, reservoirs, powerhouses, transmission lines, or other project works on or directly affecting wild and scenic rivers. Other Federal agencies may not assist by loan, grant, license, or otherwise any water resources project that would have a direct and adverse effect on the values for which a river was designated.

The Wild and Scenic Rivers Act also directs that each river in the National Wild and Scenic Rivers System (National System) be administered in a manner to protect and enhance a river's outstanding natural and cultural values. It allows existing uses of a river to continue and future uses to be considered, so long as existing or proposed use does not conflict with protecting river values. The Act also authorizes managing agencies to build partnerships among landowners, river users, tribal nations, and all levels of government.

Beyond the immediate protection afforded to the eight rivers in the enabling legislation, the Wild and Scenic Rivers Act established a process for building a legacy of protected rivers. Rivers may be identified for study by an act of Congress under Section 5(a) or through Federal agency-initiated study under section 5(d)(1). Section 5(d)(1) directs federal agencies to consider the potential of wild, scenic and recreational rivers in their planning processes and its application has resulted in numerous individual river designations and state and area-specific legislation.

Both Sections 5(a) and 5(d)(1) studies require determinations to be made regarding a river's eligibility, classification and suitability. Eligibility and classification represent an inventory of existing conditions. Eligibility is an evaluation of whether a river is free-flowing and possesses one or more outstandingly remarkable values. If found eligible, a river is evaluated to determine its current level of development (water resources projects, shoreline development, and accessibility) and a recommendation is made that it be placed into one or more of three classes—wild, scenic or recreational.

The final procedural step, suitability, provides the basis for determining whether to recommend a river as part of the National System. A suitability analysis provides information to answer the following questions:

- Should the river's free-flowing character, water quality, and outstandingly remarkable values be protected, or are one or more other uses important enough to warrant doing otherwise?
- Will the river's free-flowing character, water quality, and outstandingly remarkable values be protected through designation? Is it the best method for protecting the river corridor? In answering these questions, the benefits and impacts of wild, scenic and recreational designation must be evaluated and alternative protection methods considered.
- Is there a demonstrated commitment to protect the river by any nonfederal entities that may be partially responsible for implementing protective management?

Rivers authorized for study by Congress are protected under the Wild and Scenic Rivers Act; specifically, Sections 7(b)—prevents the harmful effects of water resources projects; 8(b)—withdraws public lands from disposition under public land laws; 9(b)—withdraws locatable minerals from appropriation under mining laws; and 12(a)—directs actions of other federal agencies to protect river values. These protections last through the study process, including a three-year period following transmittal of the final study report by the President to Congress. The integrity of the identified classification must also be maintained during the protection period.

The identification of a river as eligible through the forest planning process does not confer protections under the Wild and Scenic Rivers At. To manage the river for its potential inclusion in the National System, other authorities are cited to protect its free-flowing character, water quality, outstandingly remarkable values, and recommended classification.

Past Planning Efforts: Malheur National Forest

In 1994, an appeal decision was reached with American Rivers and the Oregon Rivers Council of the existing Forest Plan. As part of the appeal resolution, the Forest was required to further document the potential eligibility of 10 rivers. The Malheur National Forest was also required to review rivers for eligibility that had been identified in the Pacific Northwest Rivers Study (FSH 1090.12, chapter 8, Section 8.11, no. 4) and to protect eligible segments of the John Day River, Murderer's Creek, and Little Malheur River, pending analysis of suitability. Forest Service staff completed this analysis in 1995.

Past Planning Efforts: Umatilla National Forest

As a result of an agreement between American Rivers and Oregon Rivers Council, 14 rivers on the Umatilla National Forest, including the Tucannon River, were studied for eligibility. Six of the rivers were found to be eligible. If a river was eligible, classification determinations were completed for those rivers and documented in a resource report that was prepared as a "Working Paper" by the Forest. This paper has not been made available for public review; however, the Umatilla has provided interim protection and management since that time for the six eligible rivers.

Past Planning Efforts: Wallowa-Whitman National Forest

Similar to the Umatilla National Forest, through agreement between American Rivers and Oregon Rivers Council, the Forest performed evaluations of eleven rivers on the forest. These rivers were studied for their potential eligibility and suitability as wild, scenic and recreational rivers. The results have been documented in two final legislative environmental impact statements (FLEIS). The FLEIS document the analysis of eligibility and suitability of the rivers for inclusion within the National Wild and Scenic River System. Based on the analysis contained in the two FLEIS, three rivers are identified as suitable for inclusion in the national system. These recommendations have yet to be forwarded to Congress for action.

Process to Identify and Classify Potentially Eligible Wild and Scenic Rivers

The following describes the multi-step process used for identifying those rivers and streams on the Blue Mountains national forests that are potentially eligible for inclusion in the National Wild and Scenic River System. Maps of designated and potentially eligible wild, scenic, and recreational rivers are also included.

In order to identify potentially eligible rivers the Forests followed guidance outlined in the Forest Service Handbook 1912.09, chapter 80 for identifying and evaluating potential additions to the National Wild and Scenic Rivers System; and used additional guidance found in the Wild and Scenic Rivers Guidelines as published in the Federal Register/Vol. 47, No. 173/ September 7, 1982.

Step 1 – Evaluate the status of eligible wild and scenic rivers in the forests' 1990 Forest Plans and subsequent settlement agreements.

The interdisciplinary team reviewed the forest plans and the results from past eligibility studies to inform the current forest plan revision process.

Step 2 – Complete a systematic forest-wide inventory of streams and rivers.

As directed in the Wild and Scenic Rivers Act at 5(d) (1) and the Forest Service Manual policy 1924.03 a systematic inventory of named streams and rivers was completed for each of the Blue Mountains national forests. The inventory was generated from the Forests' GIS coverage of rivers and streams on the forest and other source material and resulted in identifying candidates to consider for edibility. The Forest wide inventory of hundreds of perennial streams and rivers on the Blue Mountains national forests resulted in the identification of candidate rivers and streams.

Step 3 – Determine which of the candidate named streams and rivers are free-flowing.

Initial assessments were accomplished by interdisciplinary teams representing district and/or supervisors office resource specialists that reviewed the listed named rivers and streams; and based on their knowledge, identified if the river or stream is free-flowing This determination is made by answering the question:

Is the river segment flowing in a natural condition without impoundment, diversion, straightening, rip rapping, or other modification of the waterway? Bridges and culverts are allowed and do not affect the segment's free-flowing nature.

If the river segment is not free-flowing, the river is not eligible.

Step 4 - Identify potential eligibility by determining which of the candidate named rivers and streams are free-flowing, and have a potential "outstandingly remarkable value."

To be eligible for designation, a river must be free flowing and possess one or more outstandingly remarkable value. Thus, the eligibility analysis consists of an examination of the river's hydrology, including any man made alterations; and an assessment of its natural, cultural, and recreational resources. The determination that a river area contains outstandingly remarkable values is a professional judgment on the part of the interdisciplinary team, based on objective, site-specific assessments.

In order to be assessed as outstandingly remarkable, a river related value must be a unique, rare, or exemplary feature that is significant at a comparative regional or national scale. Dictionary definitions of the words "unique" and "rare" indicate that such a value would be one that is a conspicuous example from among a number of similar values that are themselves uncommon or extraordinary. Only one such value is needed for eligibility.

The area, region or scale of comparison is not fixed, and is defined as that which serves as a basis for meaningful comparative analysis; it may vary depending on the value being considered. Typically, a "region" is defined on the scale of an administrative unit, a portion of a

state, or an appropriately scaled physiographic or hydrologic unit. The comparative scale used for this assessment is the Blue Mountains national forests and the larger surround Columbia River Basin. That is, the rivers and streams on the Blue Mountains national forests were not only compared one to another, but also included a comparison to the broader Columbia Basin region for select values.

While the spectrum of resources that may be considered is broad, all values should be directly river related. That is, they should:

a. Be located in the river or on its immediate shore lands (generally within 1/4 mile on either side of the river);

b. Contribute substantially to the functioning of the river ecosystem; and/or

c. Owe their location or existence to the presence of the river.

The following criteria were considered in order to establish whether one or more outstandingly remarkable values are present. Determining that a river area contains outstandingly remarkable values is a professional judgment that is made by an interdisciplinary team of Forest-level resource specialists, and is based on existing objective, comparative, scientific information.

Scenery

- Is there a high degree of landscape diversity?
- Has the landscape been modified?
- Is the scenic value unique to the region?

Recreation

- Are the recreation opportunities unique enough to attract visitors from outside the geographic region and would visitors be willing to travel long distances to do so?
- Are interpretive opportunities exceptional?
- Are there opportunities for national or regional competitive events?

Wildlife

- Does the stream contain nationally or regionally important populations of wildlife species?
- Are there known populations of unique or federal- or state-listed wildlife species?
- Are there known populations of candidate, threatened, endangered, and sensitive species?
- Is the diversity of species unique to the region?
- Does the stream corridor provide exceptionally high quality of unique habitat or a critical link in habitat conditions for wildlife of national or regional significance or federal- or state-listed or candidate, threatened, endangered, and sensitive species?
- Is the diversity of habitat unique to the region?

Fisheries

- Is the stream a nationally or regionally important producer of resident and/or anadromous fish species?

- Does the stream contain wild stocks and/or federal- or state-listed threatened, endangered, or sensitive species?
- Is the diversity of species or habitat unique to the region?
- Does the stream provide or have the potential to provide exceptionally high quality habitat for indigenous fish species?

Heritage Resources

- Does the stream corridor contain known occupation sites used by Native Americans that are unusual, have exceptional human interest value, have national or regional importance for interpreting pre-history, been used for sacred purposes, or listed or eligible for listing on the National Register of Historic Places?
- Does the stream corridor contain known site(s) or feature(s) associated with a significant event, important person, or cultural activity from the past that was rare or unusual? Of particular importance are sites or features that are listed in, or eligible for inclusion in the National Register of Historic Places.

Geologic/Hydrologic

- Does the stream contain an example(s) of rare or unusual geologic or hydrologic features?

Botany/Ecologic

- Does the stream corridor contain nationally or regionally important populations of indigenous plant species that are rare or unique or significant populations of federal- or state-listed or candidate threatened, endangered, or sensitive species?
- Is the diversity of plant communities unique?

Water Quality

- Does the stream have exceptionally pure, clear, and/or clean water when compared to other similar streams in the basin?
- Is this tributary recognized as providing exceptionally high quality water critical for fish, wildlife, recreation, or community uses?

Assessments were accomplished by interdisciplinary teams with district and/or supervisor office resource specialists reviewing the listed named rivers and streams, and based on their knowledge, identify whether a potential outstandingly remarkable value exists. In most cases, on-the-ground knowledge was used in developing the assessment of outstandingly remarkable values.

Step 5 - Using the Blue Mountains national forest and the broader Columbia/Snake River Basin as comparative scales, review the identified potential outstandingly remarkable values and determine whether they meet the criteria of being rare, unique, or exemplary.

This review was completed by the Forest Plan revision interdisciplinary team along with forest specialists. The interdisciplinary teams made preliminary determinations as to whether the potential outstandingly remarkable value(s) was unique, rare, or an exemplary feature that is significant at the selected comparative scale and meets the other criteria for being directly river-related (as described in a, b, c, above). These determinations resulted in the list of eligible streams that were brought forward for inclusion in the Environmental Impact Statement for

analysis in the action alternatives and include 21 rivers and streams (9 on the Umatilla, 11 on the Wallowa-Whitman and 1 on the Malheur National Forests) that are eligible for inclusion in the National System.

Narratives were developed for each stream or river system. Some outstandingly remarkable values were found to not be rare, unique, or exemplary. Based on the narratives, the outstandingly remarkable values were identified and summarized for each eligible stream or river system. The final outstandingly remarkable value(s) were determined for the entire river system.

Step 6 – Determination preliminary Classification

The potential classification of a river found to be eligible is based on the condition of the river and the adjacent lands as they currently exist. Classification identifies the level of human alteration and water quality of the river within ¼ mile of the bed and bank. The social and physical setting of the river in its current state determined the classification. Classification does not need to be consistent for the entire eligible stretch of river. An eligible river can have multiple segments each classified differently. Section 2(b) of the Wild and Scenic Rivers Act of October 2, 1968 specifies and defines three classification categories for eligible rivers: wild rivers, scenic rivers, and recreational rivers.

The USDA and USDI Guidelines for Eligibility, Classification, and Management of River Areas dated September 7, 1982 (USDA-USDI Guidelines) provides the following classification criteria for wild, scenic, and recreational rivers.

Table D-1. Classification attributes for wild, scenic and recreational river status

Attribute	Wild	Scenic	Recreational
Water Resource Development	Free of impoundment.	Free of impoundment.	Some existing impoundment or diversion. The existence of low dams, diversions, or other modifications of the waterway is acceptable, provided the waterway remains generally natural and riverine in appearance.
Shoreline Development	Essentially primitive. Little or no evidence of human activity.	Largely primitive and undeveloped. No substantial evidence of human activity.	Some development. Substantial evidence of human activity.
	The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable.	The presence of small communities or dispersed dwellings or farm structures is acceptable.	The presence of extensive residential development and a few commercial structures is acceptable.
	A limited amount of domestic livestock grazing or hay production is acceptable.	The presence of grazing, hay production, or row crops is acceptable.	Lands may have been developed for the full range of agricultural and forestry uses.
	Little or no evidence of past timber harvest. No ongoing timber harvest.	Evidence of past or ongoing timber harvest is acceptable, provided the forest appears natural from the riverbank.	May show evidence of past and ongoing timber harvest.

Attribute	Wild	Scenic	Recreational
Accessibility	Generally inaccessible except by trail.	Accessible in places by road.	Readily accessible by road or railroad.
	No roads, railroads or other provision for vehicular travel within the river area. A few existing roads leading to the boundary of the area are acceptable.	Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads or railroads is acceptable.	The existence of parallel roads or railroads on one or both banks as well as bridge crossings and other river access points is acceptable.
Water Quality	Meets or exceeds criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except where exceeded by natural conditions.	No criteria are prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendments of 1972 have made it a national goal that all waters of the United States are made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study, provided a water quality improvement plan exists or is being developed in compliance with applicable federal and state laws.	No criteria are prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendments of 1972 have made it a national goal that all waters of the United States are made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study, provided a water quality improvement plan exists or is being developed in compliance with applicable federal and state laws.

(1) Wild River Areas — The rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shoreline essentially primitive and waters unpolluted. These represent vestiges of primitive America.

These criteria are interpreted as follows:

a. "Free of impoundments." Wild river areas shall be free of impoundments.

b. "Watersheds or shorelines essentially primitive." Wild river areas will show little or no evidence of human activity. Shorelines and watersheds within the river area should be essentially free of structures including such things as buildings, pipelines, power lines, dams, pumps, generators, diversion works, riprap, and other modifications of the waterway or adjacent land within the river corridor. The existence of a few inconspicuous structures, particularly those of historic or cultural value, at the time of study need not bar wild classification. A limited amount of domestic livestock grazing or hay production may be considered "essentially primitive." There should be no row crops or ongoing timber harvest and the river area should show little or no evidence of past logging activities.

c. "Generally inaccessible except by trail." Wild river areas will not contain roads, railroads, or other provisions for vehicular travel within the river area. The existence of a few inconspicuous roads leading to the boundary of the river area at the time of study will not necessarily bar wild river classification.

d. "Waters unpolluted." The water quality of a wild river will meet or exceed federal criteria or federally approved state standards for aesthetics, for propagation of fish

and wildlife normally adapted to the habitat of the stream, and for primary contact recreation except where exceeded by natural conditions.

(2) Scenic River Areas — The rivers, or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

These criteria are interpreted as follows:

a. "Free of impoundments." Scenic river areas will be free of impoundments.

b. "Shorelines or watersheds still largely primitive." To qualify for scenic classification, the rivers segment's shorelines and immediate environment should not show substantial evidence of human activity. The portion of the watershed within the boundary of the scenic river may have some discernible existing development. "Largely primitive" means that the shorelines and the immediate river environment still present an overall natural character, but that in places land may be developed for agricultural purposes. Row crops would be considered as meeting the test of "largely primitive," as would timber harvest and other resource use, providing such activity is accomplished without a substantial adverse effect on the natural appearance of the river or its immediate environment. "Shorelines largely undeveloped," means that any structures or concentration of structures must be limited to relatively short reaches of the total area under consideration for designation as a scenic river area.

c. "Accessible in places by road." Means that roads may reach the river area and occasionally bridge the river. The presence of short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or railroads will not necessarily preclude scenic river designation. In addition to the physical and scenic relationship of the free-flowing river area to roads or railroads, consideration should be given to the type of use for which such roads or railroads were constructed and the type of use which would occur within the proposed scenic river area.

(3) Recreational River Areas — The rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

These criteria are interpreted as follows:

a. "Some impoundment or diversion in the past." There may be some existing impoundments, diversions, and other modifications of the waterway having an impact on the river area. Existing low dams, diversion works, rip-rap, and other minor structures will not bar recreational classification, provided the waterway remains generally natural and riverine in appearance.

b. "Some development along their shorelines." Lands may have been developed for the full range of agricultural and forestry uses, may show evidence of past and ongoing timber harvest, and may include some residential, commercial, or similar development.

c. “Readily accessible by road or railroad." River areas classified as recreational may contain existing parallel roads or railroads in close proximity to one or both banks of the river as well as bridge crossings and roads fording or ending at the river.”

There are several points to keep in mind when reading and applying the classification criteria:

- It is important to understand each criterion, but it is more important to understand their collective intent. Each river segment and its immediate environment should be considered as a unit. The basis for classification is the degree of naturalness, or stated negatively, the degree of evidence of man's activity in the river area. The most natural rivers will be classified wild; those somewhat less natural, scenic, and those least natural, recreational.
- Generally, only conditions within the river area determine classification; however, occasionally conditions outside the river area, such as developments that could impact air and water quality, noise levels, or scenic views within the river area, may influence classification.
- For the purpose of classification, a river area may be divided into segments. Each segment, considered as a whole, will conform to one of the classifications. In segmenting the river, the assessment should take into account the management strategies necessary to administer the entire river area and should avoid excessive segmentation.
- The Wild and Scenic Rivers Act provides no specific guidance on water quality for scenic and recreational rivers. However, the Clean Water Act has made it a national goal that all waters of the United States be made fishable and swimmable, and provides the legal means for upgrading water quality in any river which would otherwise be suitable for inclusion in the system. Therefore, rivers will not necessarily be excluded from the system because of poor water quality at the time of study, provided a water quality improvement plan exists or is being developed in compliance with applicable state and federal laws.
- Although each classification permits certain existing development, the criteria do not imply that additional inconsistent development is permitted in the future.
- The classification criteria provide uniform guidance for professional judgment, but they are not absolutes. It is not possible to formulate criteria so as to mechanically or automatically classify river areas. Therefore, there may occasionally be exceptions to some of the criteria. For example, if the assessment finds that strict application of the classification criteria would not provide the most appropriate classification for a specific river segment, the recommendation may consider an exception to the classification criteria.

The inventory of perennial streams and rivers on the Blue Mountains national forests resulted in the identification of candidate rivers and streams. An eligibility assessment of these candidates was conducted to identify any potential outstandingly remarkable values, as directed by the Forest Service Manual, and to determine the rivers free-flowing characteristics. Based on this assessment 21 rivers and streams (9 on the Umatilla, 11 on the Wallowa-Whitman and 1 on the Malheur National Forests) are eligible for inclusion in the National System.

Summary Evaluation Form

The following is an example of the summary evaluation form used by each National Forest to evaluate the rivers and streams in the Blue Mountains Plan Area. A report has been completed for each eligible river and is contained within the plan revision files at the Wallowa-Whitman Forest Headquarters.

STUDY AREA SUMMARY – Provide locational information and include a map.

Name of River: xxxx

Location: Describe the entire length studied; e.g., from its headwaters to confluence with xx. Additionally, describe each segment:

Segment x – Define termini (including legal description, as necessary). Indicate river miles.

River Mileage: Indicate the entire miles of river studied and portion determined eligible.

Studied: xx miles

Eligible: xx miles

ELIGIBILITY – Include determination of river's free-flow and whether it possesses one or more outstandingly remarkable values

Determination of Free-flow: Describe the assessment of the river's free-flow, by segment, if necessary.

Determination of Outstandingly Remarkable Values: Utilize established guidelines to evaluate specific river resource values and determine which are outstandingly remarkable. Include the criteria, the description of the particular resource value and a finding.

Summary of Outstandingly Remarkable Values: Summarize the individual resource findings by listing the values identified as outstandingly remarkable with a brief rationale.

CLASSIFICATION – Details the inventoried classification. Describe the basis for the classification of each river segment; i.e., the level of development.

Wild and Scenic Rivers

Designated Rivers

Across the Blue Mountains national forests, there are 11 rivers designated by Congress as Wild and Scenic Rivers. Of those 11 rivers, 145 miles are classified as wild, 58 miles as scenic, and 47 miles are classified as recreational rivers.

Management areas for each wild and scenic river have been developed for the proposed Revised Forest Plan of the Blue Mountains national forests. Those rivers designated by Congress which are part of the National Wild and Scenic River System are allocated to Management Area (MA) 2A – Wild and Scenic River (includes Designated, Eligible, and Suitable rivers). The designated rivers of the Malheur, Umatilla, and Wallowa-Whitman National Forests are shown in Table D-2.

Table D-2. Designated wild and scenic rivers[1] for each national forest[2]

River Name	Wild	Scenic	Recreational	Outstandingly Remarkable Values
Malheur				
Malheur River	6.7	7.0	0.0	Scenery, geology, wildlife habitat, history
North Fork Malheur River	0	25.5	0.0	Scenery, geology, wildlife, fisheries
Totals	6.7	32.5	0.0	
Umatilla				
Wenaha River	18.7	2.7	0.15	Recreation, scenery, wildlife, fisheries
Grande Ronde River[3]	17.4	0	1.5	Recreation, fisheries, wildlife
North Fork John Day River[3]	24.3	10.5	8.9	Scenic, recreation, fisheries, wildlife, cultural
Totals	60.4	13.2	10.55	
Wallowa-Whitman				
Eagle Creek	4.5	6.0	18.4	Fish, recreation, scenery, cultural resources, geology/paleontology
Grande Ronde River[3]	17.4	0.0	1.5	Recreation, fisheries, wildlife
Joseph Creek	8.6	0.0	0.0	Scenic, recreation, geology, fish, water quality, wildlife, cultural resources
Imnaha River	15.0	0.0	0.0	Scenic, recreation, fisheries, wildlife, historic, botanical, cultural resources
Lostine River	5.0	0.0	11.0	Scenic, recreation, fisheries, wildlife, botanical
Minam River	41.9	0.0	0.0	Scenic, recreation, geology, fisheries, wildlife
North Fork John Day River[3] Malheur River	3.5	0	6.9	Scenic, recreation, fisheries, wildlife, cultural
North Powder River	0.0	6.4	0.0	Recreation, scenery
Totals	95.9	12.4	37.8	

1. Mileages in this table are derived from legislative language and/or the most recent figures reported in river plans (or "Comprehensive River Management Plans").
2. Miles within the Hells Canyon National Recreation Area are not included in this table.
3. The Grande Ronde and North Fork John Day rivers are listed above for both the Umatilla and Wallowa-Whitman National Forests as administration is shared. Mileage for the North Fork John Day River is divided within the table to reflect the mileage within and administered by each national forest. The Grande Ronde River is part of the administrative boundary between the Umatilla and Wallowa-Whitman National Forests, and the mileage is displayed equally for each of the national forests and is only counted once in the overall total.

Eligibility Summary

As part of the forest plan revision process, the three Forests reviewed their full documentation regarding eligibility and suitability of all perennial streams and rivers located with the planning area. Table D-3 lists the eligible wild, scenic, or recreational river, their classification, and outstandingly remarkable values for rivers located on each Forest.

Table D-3. Eligible wild and scenic river list with classification recommendation

River Name	Wild	Scenic	Recreational	Outstandingly Remarkable Values
Malheur Lake Creek	3.3	0.0	0.0	Scenery, geologic, vegetation/botanical
Umatilla Bear Creek	4.6	0.0	0.0	Fisheries
Butte-West Fork Creek	13.9	0.0	0.0	Scenery
Desolation Creek	0.0	0.0	21.5	Recreation, botanical
Lookingglass Creek	0.0	7.9	0.0	Hydrological
North Fork Desolation Creek	0.0	0.0	6.8	Botanical
North and South Fork Wenaha River	26.3	0.0	0.0	Scenery, fisheries, botanical
Sheep Creek (in Washington)	0.0	0.0	0.5	Scenery, botanical
South Fork Desolation Creek	0.0	8.9	0.0	Fisheries, botanical
Tucannon River	9.1	4.6	8.7	Recreation, fisheries, cultural, botanical
Totals	**53.9**	**21.4**	**37.5**	
Wallowa-Whitman Big Sheep Creek	10.0		39.1	Recreation, fisheries, cultural
Dutch Flat Creek/Van Patton Creek*	5.3	0.0	0.0	Scenery, recreation, geological, hydrological, botanical
East Eagle Creek*	9.0	0.0	6.6	Scenery, recreation, fisheries, geological, cultural
Five Points Creek*	0.0	12.1	0.0	Scenery, fisheries, wildlife
Killamacue/Rock Creek	10.2	8.6	0.0	Scenery, recreation, geologic, botanical
North Fork Catherine Creek	11.1	0.0	2.6	Scenery, recreation, fisheries, wildlife
Swamp Creek	9.2	0.0	7.6	Fisheries, wildlife, cultural
Upper Grande Ronde River	11.7	0.0	18.0	Recreation, fisheries, wildlife, cultural
Totals	**66.5**	**20.7**	**73.9**	
Total All	**123.7**	**42.1**	**111.4**	

* These rivers have been determined suitable in Dutch Flat Creek, Killamacue Creek and Rock Creek Wild and Scenic River Study Report (1996) and Wild and Scenic River Study Report and Final Legislative Environmental Impact Statement for Eight Rivers (1997).

The Malheur National Forest revisited the 1995 river resource evaluation to determine if unforeseen or uncontrollable changes had occurred within the watersheds, thus affecting the eligibility of the streams for wild, scenic, or recreational river designation. All streams on the Forest were affected in some way by either uncontrolled wildland fire or by the listing of federally designated anadromous fish species. Fire changed the conditions of many watersheds drastically, impacting habitat, scenery, and water quality to a level that affected the significance of the resource with the exception of one stream. Also the federal listing of anadromous fish species as threatened or endangered was determined to be so regionally broad that the mere presence of a species was no longer regionally significant. The populations and habitat were now recognized under wild, scenic, or recreational river direction at a lesser level of significance when compared within the Columbia/Snake River systems, and thus this singular characteristic did not now exceed the threshold of regional significance that is required for outstandingly remarkable value status. After the 2005 review, the Malheur National Forest determined that one stream located on the Forest met the eligibility criteria.

The Umatilla National Forest found that some of the study rivers previously identified as eligible were not now found to meet the minimum criteria. Clear Creek is not free-flowing. North Fork Umatilla River, South Fork Umatilla River, Shimmiehorn Creek, South Fork Cable Creek, North Fork Meacham Creek, and South Fork Walla-Walla River are free-flowing but do not have outstandingly remarkable values as defined by the criteria outlined in the Wild and Scenic Rivers Act.

All previously identified study rivers on the Wallowa-Whitman met the established Wild and Scenic Rivers Act criteria, however new candidate rivers were not identified.

River evaluation findings are presented in a Summary Information Document for each candidate river that provides a synopsis of the information related to eligibility, classification and/or suitability (as applicable). All summary information documents are available in the project record. All Eligible rivers are shown in Table D-3. Maps follow, as well as detailed summaries of the eligibility with classification summaries in Table D-4 through Table D-6.

Table D-4. Eligible wild and scenic river summary with classification recommendation for the Malheur National Forest

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
Lake Creek	Wild – 3.3	SCENERY Starting at High Lake the creek is considered a scenic and popular destination in the Strawberry Mountain Wilderness featuring unique rock escarpments and meadows, creating contrast in landform, vegetation, color, climate, and sound. The scenery within view of Lake Creek is an outstandingly remarkable value. GEOLOGY The creek flows over large slabs of bedrock with several high mountain meadows, with high concentrations of springs feeding the creek. It is unique geologically: the drops are dramatic with waterfalls and slot canyons all through the rock portions. Based on these factors, the geology is an outstandingly remarkable value. VEGETATION/BOTANICAL High meadow systems have created unique features with spruce bogs present along the creek, further influencing the creek and meadow systems. The vegetation/botanical resources of Lake Creek is an outstandingly remarkable value.

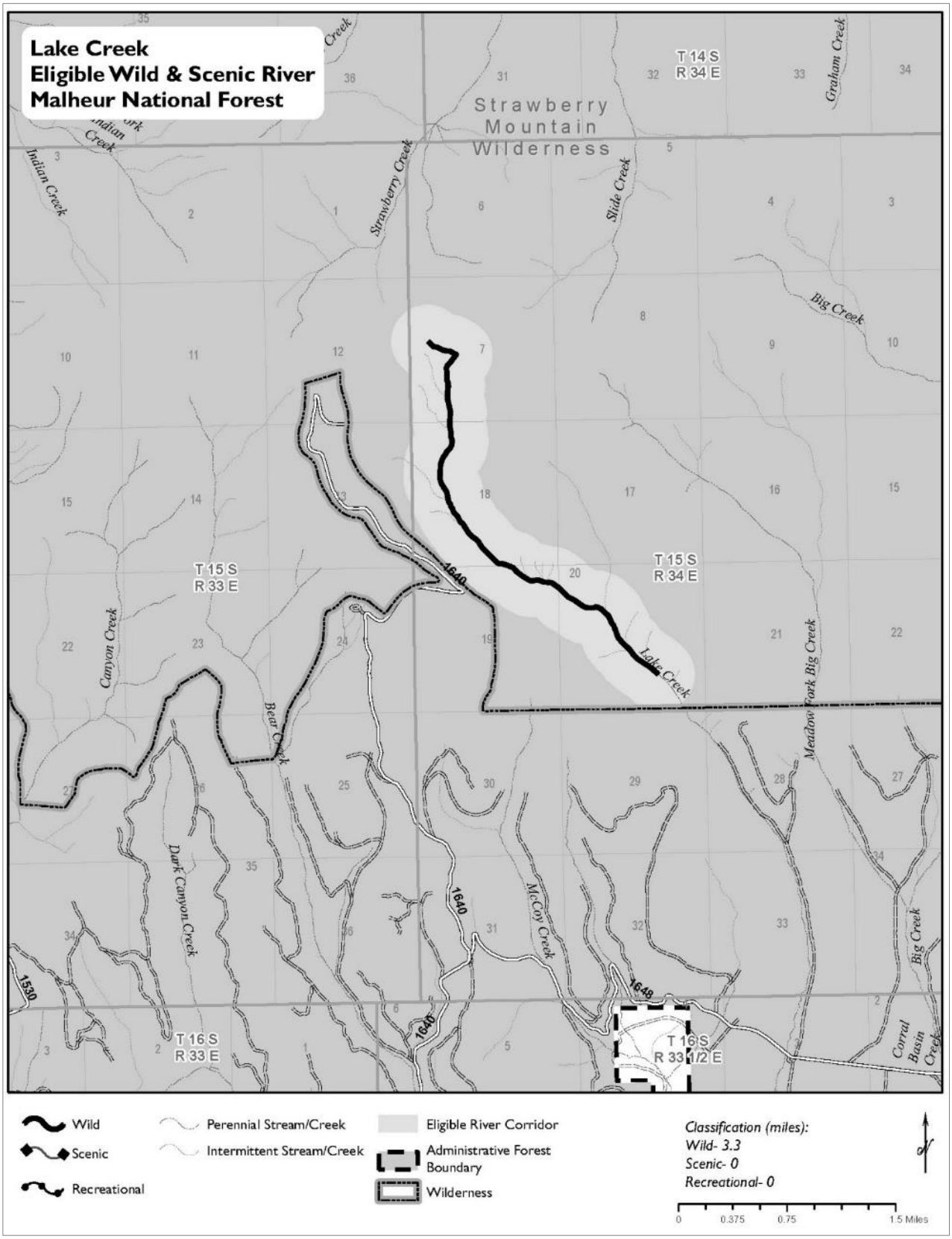

Figure D-1. Lake Creek eligible wild and scenic river, Malheur National Forest

Table D-5. Eligible wild and scenic river summary with classification recommendation for the Umatilla National Forest

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
Bear Creek From the headwaters to confluence with Tucannon River	Wild – 3	FISHERIES - Bear Creek contains native Chinook, bull trout and steelhead, which are federally listed as threatened under the Endangered Species Act. Bull trout populations in the Tucannon River are considered isolated and unique. Habitat is limited but pristine. The assessment finds the fisheries habitat and populations to be outstandingly remarkable values.
Butte Creek From headwaters to confluence with the mainstem Wenaha River	Wild – 8	SCENERY - The Wenaha River and surrounding Wenaha -Tucannon Wilderness, including Butte Creek, is recognized nationally for its scenic qualities. The mosaic of vegetation and stark ruggedness of the landscape contribute to an exceptional scenic quality. Scenery qualifies as an outstandingly remarkable value.
Desolation Creek The mainstem of Desolation Creek from the confluence of the north and south forks to the confluence with the North Fork John Day River	Recreational – 21.5	RECREATION - Combined amenities of a large big game population, good roaded access to trailhead locations, adjacency to large, remote backcountry areas and desirable campsites within the river corridor make this a desirable destination. Conditions of the river-related setting make recreation an outstandingly remarkable value. BOTANICAL/ECOLOGICAL - Regionally unique and rare plant species have been identified in Desolation Meadow. The stream corridor displays a broad range of botanic diversity due to its size and broad change in elevation. The ecological diversity is exceptional and exhibits outstandingly remarkable values for botany and plant ecology.
Lookingglass Creek From the unnamed tributary in section 3 near Bald Mountain lookout to the forest boundary	Scenic – 7	HYDROLOGIC - The impact that the springs near Summer Creek have on the water quantity and quality is rare in the Blue Mountains. The temperature and condition of the water that enters the stream course from this source provides the foundation for fisheries resources in the creek. Lookingglass Springs is visually impressive with the flow of the springs gushing from the bank and streambed growing forty-fold over a distance of a couple of hundred yards. The hydrology of Lookingglass is an outstandingly remarkable value.
North Fork Desolation Creek Headwaters to confluence with Main Desolation Creek	Recreational – 7	BOTANICAL/ECOLOGICAL - Regionally unique and rare plant species have been identified in the meadows along the stream corridor, which displays a broad range of botanic diversity due to its size and broad change in elevation. The ecological diversity is exceptional and exhibits outstandingly remarkable values for botany and plant ecology.

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
North Fork Wenaha and South Fork Wenaha River North Fork Wenaha from headwaters to confluence with mainstem Wenaha River, and South Fork Wenaha from headwaters to confluence with mainstem Wenaha River	Wild – 26.3	SCENERY - The Wenaha River and surrounding Wenaha -Tucannon Wilderness is recognized nationally for its scenic qualities. The mosaic of vegetation and stark ruggedness of the landscape contribute to an exceptional scenic quality. Scenery qualifies as an outstandingly remarkable value. FISHERIES – The Wenaha River system contains native Chinook, bull trout, and steelhead, which are listed as threatened under the Endangered Species Act. Bull trout populations are considered as one of the healthiest in the Grande Ronde subbasin. The habitat is pristine. The assessment finds the fisheries habitat and populations to be outstandingly remarkable values. BOTANICAL/ECOLOGICAL - The large elevational range, little disturbance to bank vegetation, and presence of old growth habitat are special attributes. High likelihood of sensitive or threatened species located within the corridor. The area contains outstandingly remarkable value botanic resources.
Sheep Creek (Washington) Upstream from the confluence with Tucannon River	Recreational – 0.5	SCENERY - Sheep Creek Falls is a scenic location that specifically attracts visitors to this area and has been long noted for its unusual vegetation. Flora accompanied by rock walls of overhanging moss and spring water creates an aesthetic environment and scenery within the corridor is special and unique. Scenery qualifies as an outstandingly remarkable value. BOTANICAL/ECOLOGICAL - The plant communities are unusually diverse and represent some uncommon species. The Sheep Creek Falls refugia is a botanical Special Interest Area and is a recreation attraction. The area contains outstandingly remarkable value botanic resources.

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
South Fork Desolation Creek Headwaters to confluence with main Desolation Creek	Scenic – 9	FISHERIES - Isolated fish populations in the upper portion have significance as a genetic resource and the lower portion provides spawning habitat for steelhead, Chinook, redband trout, and Columbia River bull trout. The diversity of habitat is unique to the region. The populations and habitat comprise an outstandingly remarkable value of fisheries. BOTANICAL/ECOLOGICAL - Regionally unique and rare plant species have been identified in the high elevation meadows along the stream corridor. The stream corridor displays a broad range of botanic diversity due to the fire-dependent ecosystems. The ecological diversity is exceptional and exhibits outstandingly remarkable values for botany and plant ecology.
Tucannon River From headwaters to the Tucannon Guard Station	Wild – 9.1, Scenic – 4.6, Recreational – 8.6	RECREATION - Because of this river setting, most use originates outside the local area. The river-related environment is the focal attraction, particularly attractive to visitors seeking sightseeing, camping, fishing, wildlife viewing, photography, hiking, and other outdoor activities in a natural appearing landscape. Camp Wooten instills a lifelong allegiance to the corridor for many youth. Potential interpretive opportunities are varied and could reach a wide audience. Conditions of the river-related setting make recreation an outstandingly remarkable value. FISHERIES - Each drainage has some distinct genetic traits. Endangered and sensitive listed fish are present and the complex habitat is exemplary. The populations along with the habitat comprise an outstandingly remarkable value for fisheries. CULTURAL/HISTORIC - The Tucannon River corridor has a long history of settlement, resource use, and recreation and some historic evidence exists. Early maps show homesteads, a sawmill, schoolhouse, trail system, roads, telephone lines, camps, and a ranger station. Interpretation may enhance the value of recognized heritage resources. The presence of old structures, along with the likelihood of other historic finds, make the historic resource an outstandingly remarkable value. BOTANY/ECOLOGY - The general condition, health, and stability of the riparian vegetation is among the highest in the Blue Mountains. The plant community is unusually diverse representing some uncommon species. Sheep Creek Falls is the basis for a Botanical Special Interest Area. The complex riparian habitat is critical for survival of endangered and sensitive fish species. The area contains outstandingly remarkable value botanic resources.

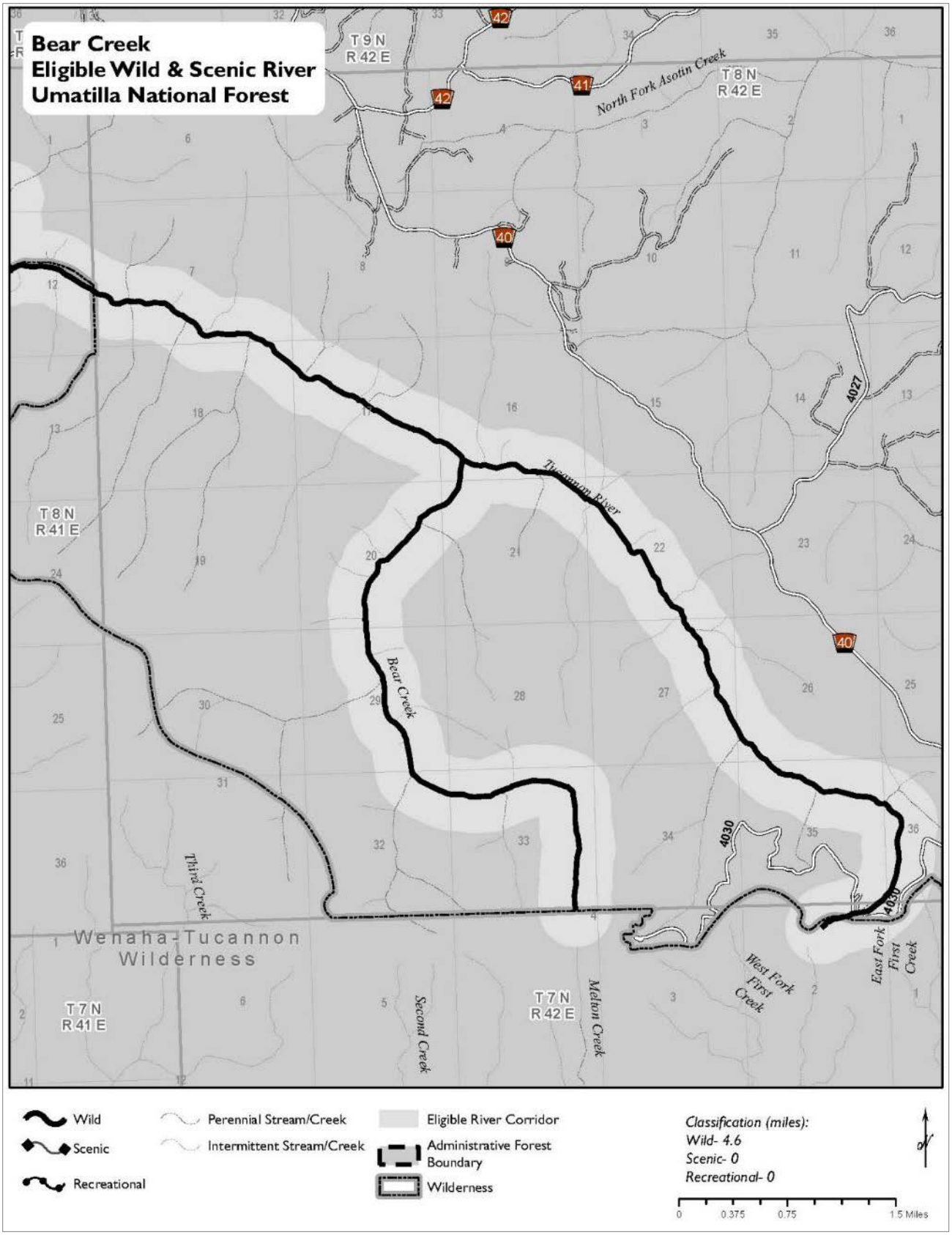

Figure D-2. Bear Creek eligible wild and scenic river, Umatilla National Forest

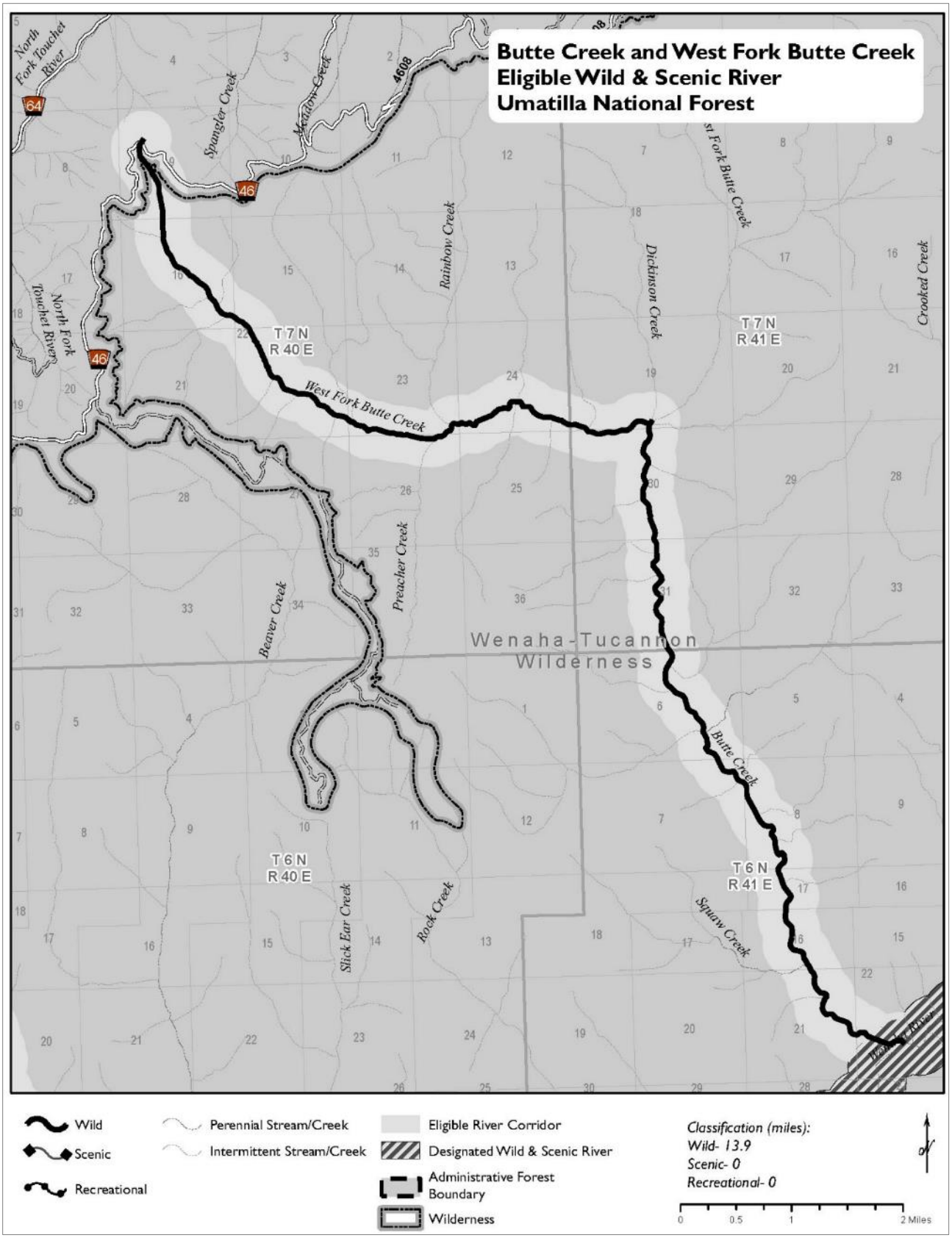

Figure D-3. Butte Creek and West Fork Butte Creek eligible wild and scenic river, Umatilla National Forest

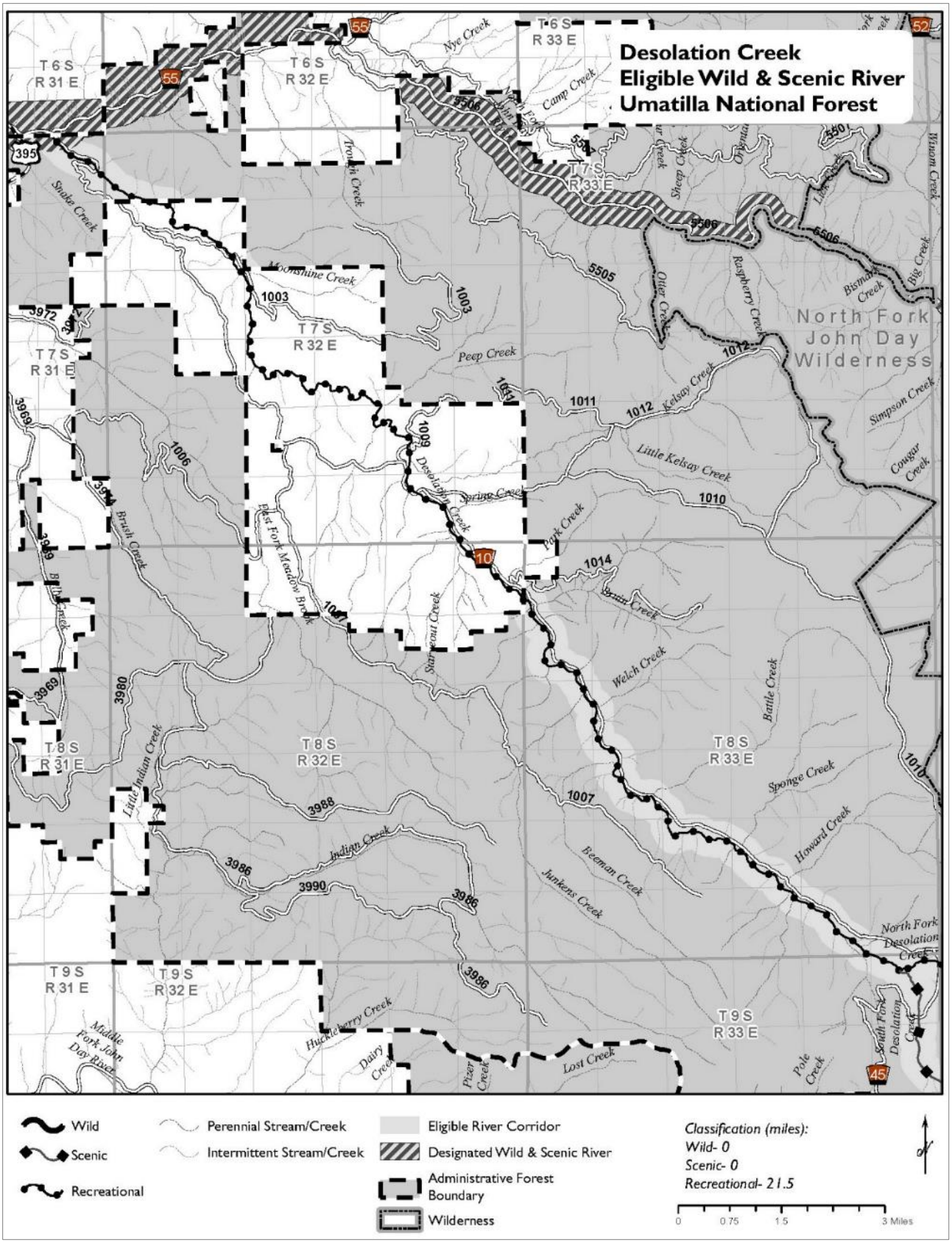

Figure D-4. Desolation Creek eligible wild and scenic river, Umatilla National Forest

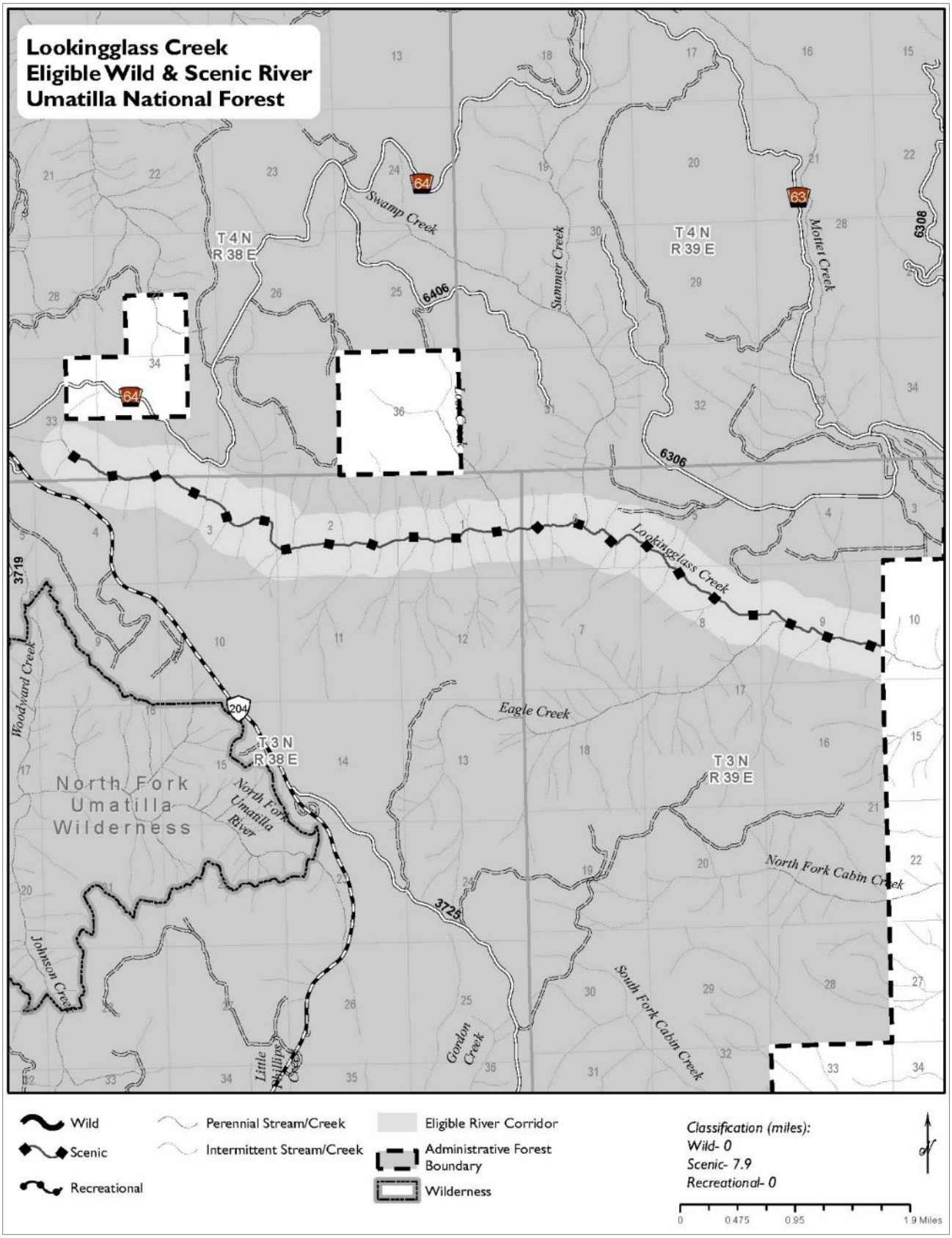

Figure D-5. Lookingglass Creek eligible wild and scenic river, Umatilla National Forest

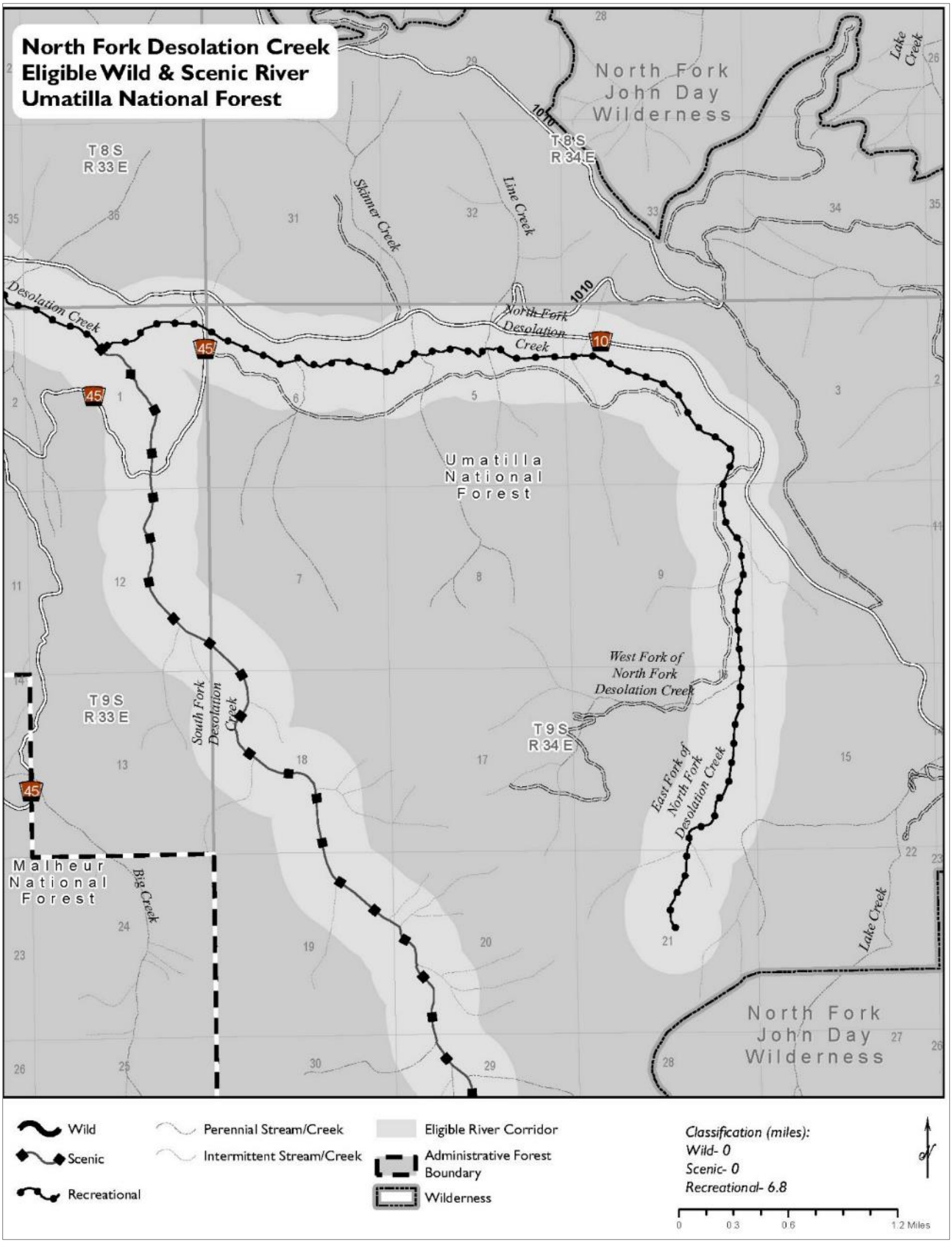

Figure D-6. North Fork Desolation Creek eligible wild and scenic river, Umatilla National Forest

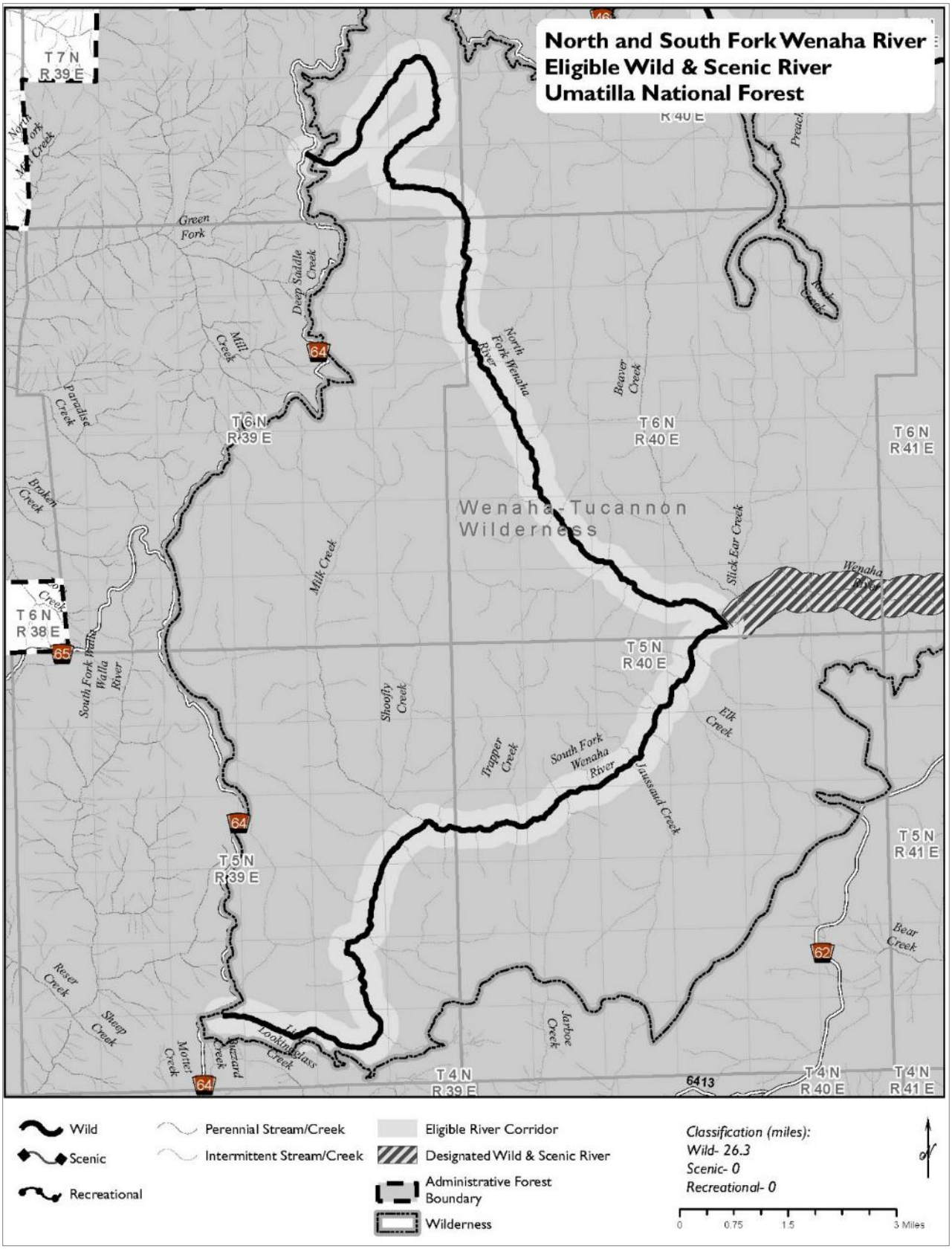

Figure D-7. North and South Fork Wenaha River eligible wild and scenic river, Umatilla National Forest

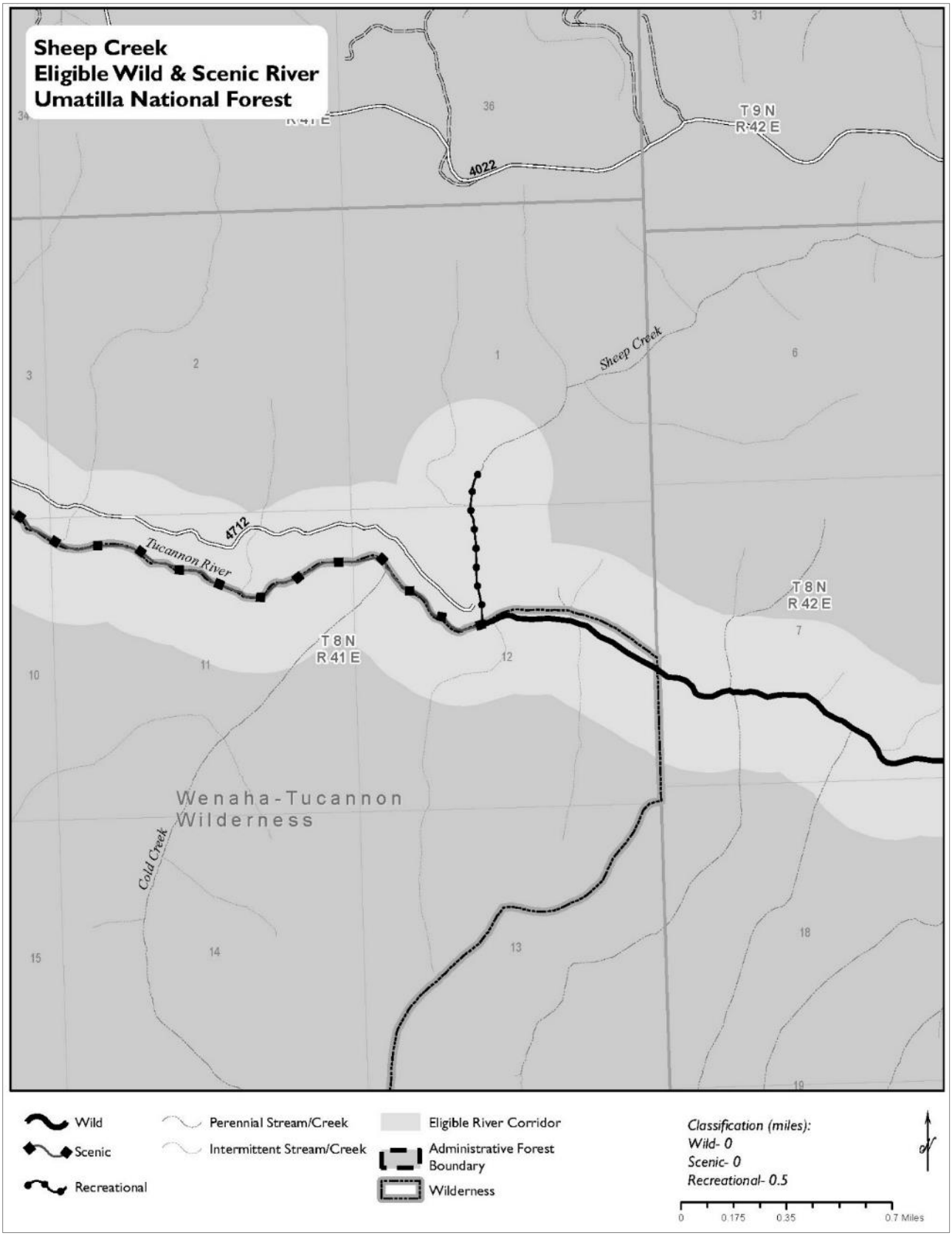

Figure D-8. Sheep Creek eligible wild and scenic river, Umatilla National Forest (in Washington)

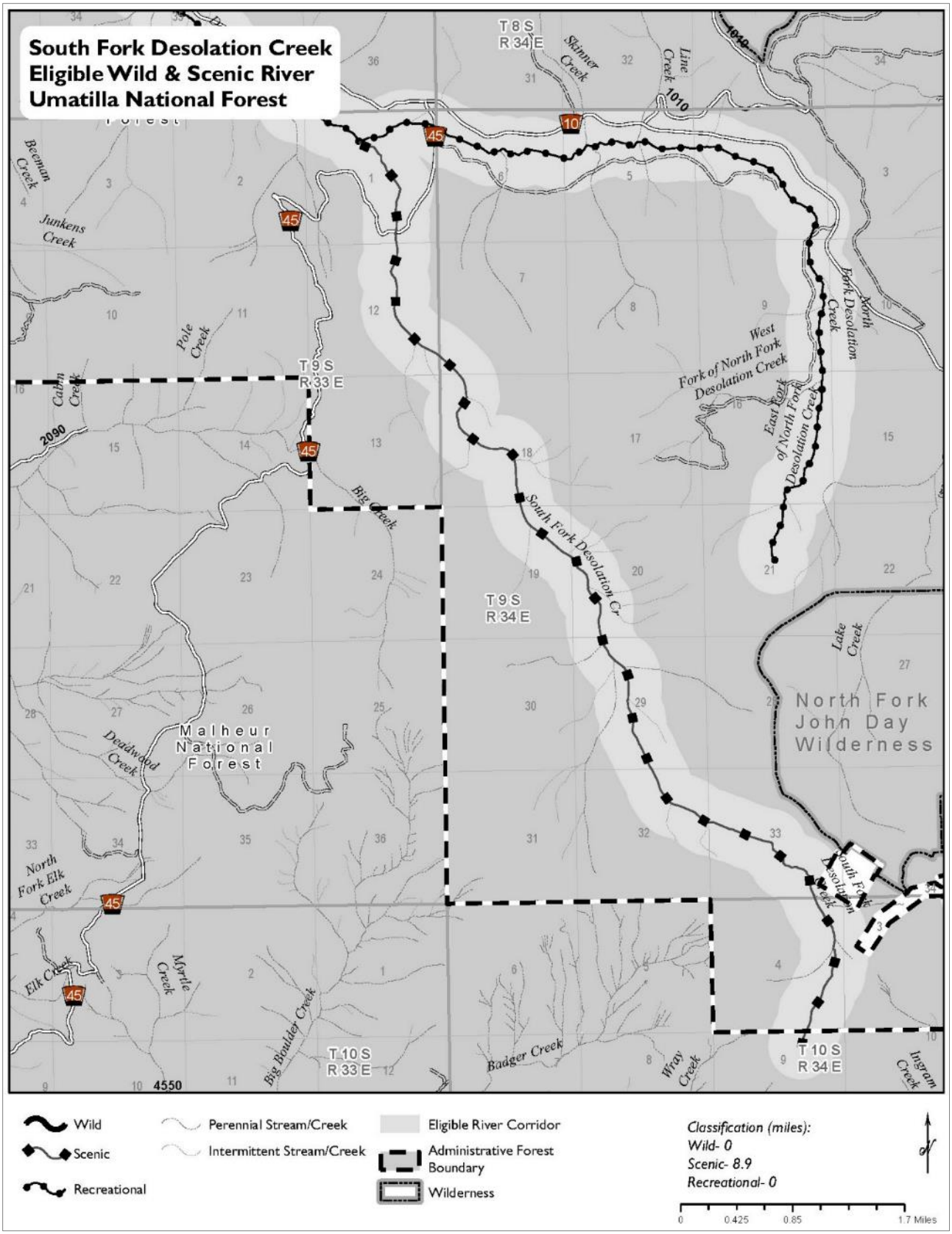

Figure D-9. South Fork Desolation Creek eligible wild and scenic river, Umatilla National Forest

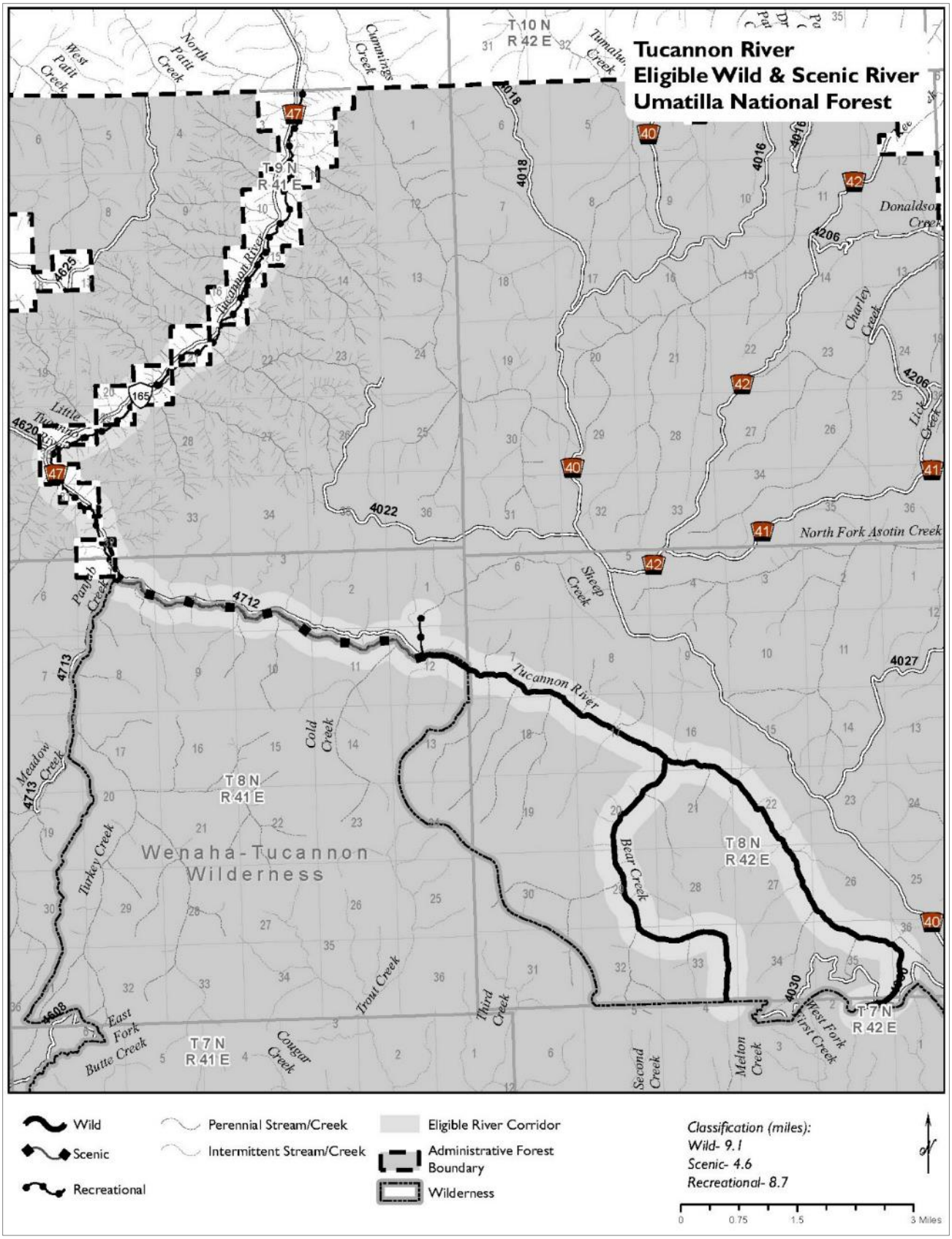

Figure D-10. Tucannon River eligible wild and scenic river, Umatilla National Forest

Table D-6. Eligible wild and scenic river summary with classification recommendation for the Wallowa-Whitman National Forest[1]

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
Big Sheep Creek From the headwaters (and including) the North Fork, Middle Fork and South Fork to the Imnaha WSR boundary.	Wild – 9.5 Recreational – 38.5	RECREATION - The quality, variety, and year-round recreation opportunities available along middle and upper Big Sheep Creek make it a popular area with local and regional visitors. The stream corridor is an excellent area for viewing wildlife. Conditions of the river-related setting make recreation an outstandingly remarkable value upstream from Carrol Creek. FISHERIES – Populations of Chinook salmon; steelhead; native rainbow trout; and established bull trout are present. Big Sheep Creek supports populations of fish species that are regionally and nationally important, and has a great potential for high-quality fisheries habitat for indigenous stocks. The populations along with the habitat comprise an outstandingly remarkable value fisheries value. CULTURAL/PREHISTORIC – There are known sites that are either named to the National Register of Historic Places or are eligible and the stream corridor contains a unique concentration of prehistoric sites. The presence of old structures and historical human interest make the historic resource an outstandingly remarkable value.
Dutch Flat/ Van Patton Creek[2] From the Headwaters of Dutch Flat Creek to the forest boundary including Van Patton Creek from Van Patton Lake to its confluence with Dutch Flat Creek.	Wild – 9.1	SCENERY - Plant diversity, mountain meadows, and mountain vistas of rugged Elkhorn Ridge provide year long, high-quality scenic values in the stream corridor. Natural patterns created by topography and natural processes such as lightning fires, avalanches, and rock slides, dominate the landscape character. The scenic diversity in landform, color, and vegetation qualifies as an outstandingly remarkable value. RECREATION - The Dutch Flat Creek system offers a diversity of remote, semi-primitive recreation opportunities including hunting, fishing, hiking, mountain biking, sightseeing and horseback riding. The variety and remoteness of opportunities in the corridor provide an outstandingly remarkable value for recreation. GEOLOGIC - Excellent examples of glacial plucking, striation, and polish, and exfoliation features that in some locations rival features preserved in Yosemite National Park. Dutch Flat Creek and Van Patton Creek are determined to contain outstandingly remarkable value for geologic features. HYDROLOGY - The high gradient reaches below Dutch Flat Lake are characterized by steep riffles and water cascading over boulders. Dutch Flat Creek provides excellent examples of several distinct types of distinctive stream channels not represented by other established northeastern Oregon Wild and Scenic Rivers. The hydrology of Dutch Flat Creek was considered to be outstandingly remarkable value from its confluence with Van Patton Creek to its headwaters. BOTANICAL/ECOLOGICAL – Sensitive plants species occur in the upper reaches of Dutch Flat Creek including *Allium madidum* and *Lycopodium annotinum*. The ecological diversity is exceptional and exhibits outstandingly remarkable value for botany and plant ecology in the upper reaches of Dutch Flat Creek.

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
East Eagle Creek[2] Headwaters in the Eagle Cap Wilderness to the confluence of Eagle and East Eagle Creeks.	Wild – 9.0 Recreational – 6.5	SCENERY - Attractions that combine to create East Eagle Creek's scenic beauty are the glaciated landscape; the steep, forested canyon with numerous waterfalls, rapids, and deep pools; and the views of Granite Cliff and Krag Peak. Vegetation diversity includes lush meadows; subalpine fir and spruce; larch, fir, and ponderosa pine forests; and grassy openings. East Eagle Creek has been a focus of human interest since the turn of the century, however visual impacts remain relatively minor and the drainage presents an overall natural landscape. The scenic diversity in landform, water, color, and vegetation qualifies as an outstandingly remarkable value. RECREATION - The quality and diversity of dispersed recreation opportunities available along the East Eagle Creek make it a popular area almost year-round. There are exceptional opportunities to develop interpretive sites or tours to explain the area's unique natural and cultural history. Interpretation of the area's gold mining history could be developed to complement the other nearby historic sites such as the Oregon Trail Interpretive Center, potentially attracting visitors from outside the geographic region. Conditions of the river-related setting make recreation an outstandingly remarkable value. FISHERIES - East Eagle Creek is known for its excellent trout fishing and supports significant fishing activity throughout the season. The importance of the existing good-to-high-quality habitat which supports native trout, possibly including bull trout is notable. The populations along with the habitat comprise an outstandingly remarkable value for fisheries. GEOLOGIC - The variety of rare and exemplary geologic features in the corridor, particularly in the middle and lower reaches of East Eagle Creek merit the recognition. The quality, variety, and importance of the geology qualify as an outstandingly remarkable value. CULTURAL/HISTORIC - The settlement of northeast Oregon is tied to the discovery of gold and East Eagle Creek still has much evidence of this history. Outstanding opportunities exist to interpret a number of features located in fairly close proximity within the corridor. The presence of old structures and historical human interest make the historic resource an outstandingly remarkable value.

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
Five Points Creek[2] Headwaters north of the confluence with the Middle Fork of Five Points Creek to the NF boundary about ¼-mile southwest of Blacksmith Canyon.	Scenic – 12	SCENERY - The combination of distinctive landscape elements, lack of cultural modifications, and the primitive and undisturbed nature of the view shed are notable. Scenery qualifies as an outstandingly remarkable value. FISHERIES - The presence of summer steelhead and native rainbow trout populations and the existing "high quality" of fisheries habitat (specifically water quality, low temperatures, low turbidity) for indigenous stocks and for spring/summer Chinook salmon in the Grande Ronde River. The populations along with the habitat comprise an outstandingly remarkable value for fisheries. WILDLIFE – The existing habitat is significant and the presence of wildlife species of interest, including the bald eagle and a significant population of elk are notable. The quality, variety, and importance of existing wildlife habitat, comprise an outstandingly remarkable value for wildlife.
Killamacue/ Rock Creek Killamacue Creek from its headwaters to the diversion ditch near the confluence with Rock Creek, and Rock Creek from below the outlet of Rock Creek Dam to the NF boundary including North Fork and South Fork Rock Creek.	Wild – 11.9 Scenic – 7.0	SCENERY - High-quality scenic values include plant diversity, mountain meadows, and mountain vistas of the Elkhorns, a rocky and rugged range with aspen groves scattered among granite outcroppings. Other outstanding scenery associated with rock forms, timber stands and open alpine and subalpine vistas exhibit an overall natural and undeveloped character. Scenery in these drainages qualifies as an outstandingly remarkable value. RECREATION - The Rock Creek corridor offers a unique opportunity in northeast Oregon to access a relatively primitive setting by four-wheel drive vehicle. The amount of semi-primitive roads in an area this large makes it unique to the region and important for semi-primitive motorized travel recreational opportunities with easy access from Interstate 84 and the Baker Valley. The Killamacue and Rock Creek system offer a diversity of semi-primitive recreation opportunities in a remote relatively primitive setting with low use. The variety and remoteness of recreation opportunities in the corridor provide an outstandingly remarkable value for recreation. GEOLOGIC - The upper drainages of the North Fork of Rock Creek and of Killamacue Creek contain exposures of a rare rock type called lamprophyre. Study of these rocks will provide outstanding and critical contributions to understanding the tectonic history of northeast Oregon. Killamacue Creek drainage contains a narrow glacial hanging valley and the polished outcrops and rounded glacial forms are easily visible, easy to access, and major in scope. The quality, variety, and importance of the geology qualify as an outstandingly remarkable value. BOTANICAL/ECOLOGICAL - Killamacue Creek has nine different wetland types along the relatively short study reach and the number and diversity of wetland types is unique in such a small area. Because the plants, meadows, riparian areas, and plant associations are common in northeast Oregon, Rock Creek does not contain ecological/botanical outstandingly remarkable value values, although some sensitive plant species are present. Killamacue Creek exhibits outstandingly remarkable values for ecological and botanical values.

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
North Fork Catherine Creek From its headwaters in the Eagle Cap Wilderness to the National Forest boundary near its confluence with South Fork Catherine Creek.	Wild- 10.5 (from headwaters to Catherine Creek Campground) Recreation – 2.5 (from Catherine creek campground to NF boundary)	SCENERY - The North Fork Catherine Creek drainage possesses scenic features notable in the geographic region. Some of the attributes that contribute to the scenic value of the area include the diversity of landforms from the glaciated headwaters to the dissected basalt uplands found lower in the corridor, the free-flowing river, and the diversity of vegetation. The scenery of the area qualifies as an outstandingly remarkable value. RECREATION - The quality and diversity of recreational opportunities available in the North Fork Catherine Creek corridor makes it a popular area with local residents and draws a substantial number of visitors from outside the region. Conditions of the river-related setting make recreation an outstandingly remarkable value. FISHERIES - The presence of stable habitat supporting four salmonid species, including three federally listed species, is highly significant regionally. Critical spring/summer Chinook salmon spawning habitat is found in this portion of the river. The populations along with the habitat comprise an outstandingly remarkable value for fisheries. WILDLIFE - The presence of high-quality wildlife habitat; the number of kinds of habitat; the presence of unique habitat; the juxtapositions of habitats; the contiguous nature of riparian corridors; all contribute to an ecosystem component unmatched in diversity. The diversity of vegetation, number of natural edges utilized by big game and nongame species, and presence of old-growth mixed conifer stands in the corridor, provide important habitat for a variety of wildlife species. The diversity of habitat found in the corridor supports a finding of outstandingly remarkable value.
Swamp Creek From the National Forest boundary to the WSR boundary.	Wild – 8.5 Recreational – 9.5	FISHERIES - In addition, Swamp Creek supports a wild summer steelhead population that is regionally important, and has potential for high-quality fisheries habitat for indigenous stocks including native rainbow trout populations. The populations along with the habitat comprise an outstandingly remarkable value for fisheries WILDLIFE - The inaccessibility, diversity, and significance of the wildlife populations in Swamp Creek along with the presence of bald eagles and the large stretch of riparian habitat make the area important. The quality, variety, and importance of existing wildlife habitat, comprise outstandingly remarkable value for wildlife. CULTURAL/HISTORIC - The Swamp Creek stream corridor plays a vital role in Nez Perce tribal history. Most important is the proximity to the gathering place for Chief Joseph and his band at the confluence of the Grande Ronde River and Joseph Creek. In addition, the old homesteads and evidence of railroad logging add to the interpretive potential of the area. Important cultural resources along with the presence of old structures and historical human interest make the cultural and historic resource an outstandingly remarkable value.

Description of Segment Potential	Potential Classification (miles)	Summary of Outstandingly Remarkable Values
Upper Grand Ronde River Headwaters to the National Forest boundary near the mouth of Fly Creek	Wild – 11 Recreational – 19	RECREATION - The quality and variety of recreation opportunities available along the Upper Grande Ronde River make it a popular area with local and regional visitors. The river corridor is an excellent area for viewing wildlife and is one of the most heavily used areas in the state during the fall big game hunting seasons. Conditions of the river-related setting make recreation an outstandingly remarkable value. FISHERIES - This river provides critical spring and summer spawning habitat for Chinook salmon, steelhead, and bull trout species. The fish populations along with the habitat comprise an outstandingly remarkable value for fisheries. WILDLIFE - The presence of suitable habitat for bald eagles and their use of the river corridor; high quality and quantity of wildlife habitat; the presence of unique habitat; the juxtapositions of habitats and contiguous nature of riparian corridors, all contribute to an uncommon ecosystem. The quality, variety, and importance of existing wildlife habitat, comprise an outstandingly remarkable value for wildlife. CULTURAL/HISTORIC - There are several features of historical human interest in the corridor. The splash dam in Vey Meadows is a relatively unique feature for northeast Oregon as well as the Camp Carson historic mining district, which is potentially eligible for the National Register of Historic Places. Interpretive opportunities are excellent. The presence of old structures and historical human interest make the historic resource an outstandingly remarkable value.

1. For Alternatives D, E, E-Modified, E-Modified Departure, and F, the eight rivers identified as not suitable for National Wild and Scenic River System designation would be considered ineligible. This finding is documented in the Wild and Scenic River Study Report and Final Legislative Environmental Impact Statement. Maps for rivers determined not suitable are not presented below. Please refer the management area maps for the locations of MA 2A for each of the alternatives, available from the plan revision website: http://www.fs.usda.gov/goto/BlueMtnsPlanRevision.
2. These rivers have been determined suitable in Dutch Flat Creek, Killamacue Creek and Rock Creek Wild and Scenic River Study Report (1996) and Wild and Scenic River Study Report and Final Legislative Environmental Impact Statement for Eight Rivers (1997).

Suitability Summary

The final phase of study addresses the suitability of a river for inclusion in the National Wild and Scenic Rivers System. The Wallowa-Whitman National Forest prepared suitability studies for eleven rivers determined eligible on that national forest. The eleven rivers studied are all or portions of the Big Sheep Creek, Dutch Flat- Van Patton Creek, East Eagle Creek, Five Points Creek, Killamacue/ Rock Creek, Granite Creek, North Fork Catherine Creek, Sheep Creek, Swamp Creek, Upper Grande Ronde River and the Snake River. Of these, three were found to be suitable for inclusion within the Wild and Scenic Rivers System (Table D-7). These recommendations have yet to be forwarded to Congress for action.

Table D-7. Suitable wild and scenic river list with classification recommendation

River Name	Wild	Scenic	Recreational	Outstandingly Remarkable Values
Dutch Flat Creek	5.3	0.0	0.0	Scenery, recreation, geological, hydrological, botanical
East Eagle Creek	9.0	0.0	6.6	Scenery, recreation, fisheries, geological, cultural
Five Points Creek	0.0	12.1	0.0	Scenery, fisheries, wildlife
Totals	**14.3**	**12.1**	**6.6**	

A description of the alternatives, including river classification and miles recommended, can be found in The Dutch Flat Creek, Killamacue Creek, and Rock Creek Wild and Scenic River Study Report and EIS (1996) and the Wild and Scenic River Study Report and Final Legislative Environmental Impact Statement for Eight Rivers Administered by the Wallowa-Whitman National Forest (1996).

The suitability study phase will be initiated at a later date for the 10 eligible rivers on the Umatilla and Malheur National Forests. However, the forest plan will provide management direction to protect the free-flowing character, potential classification, and outstandingly remarkable values of eligible rivers until a suitability study is completed and final recommendation to Congress regarding river designation is made.

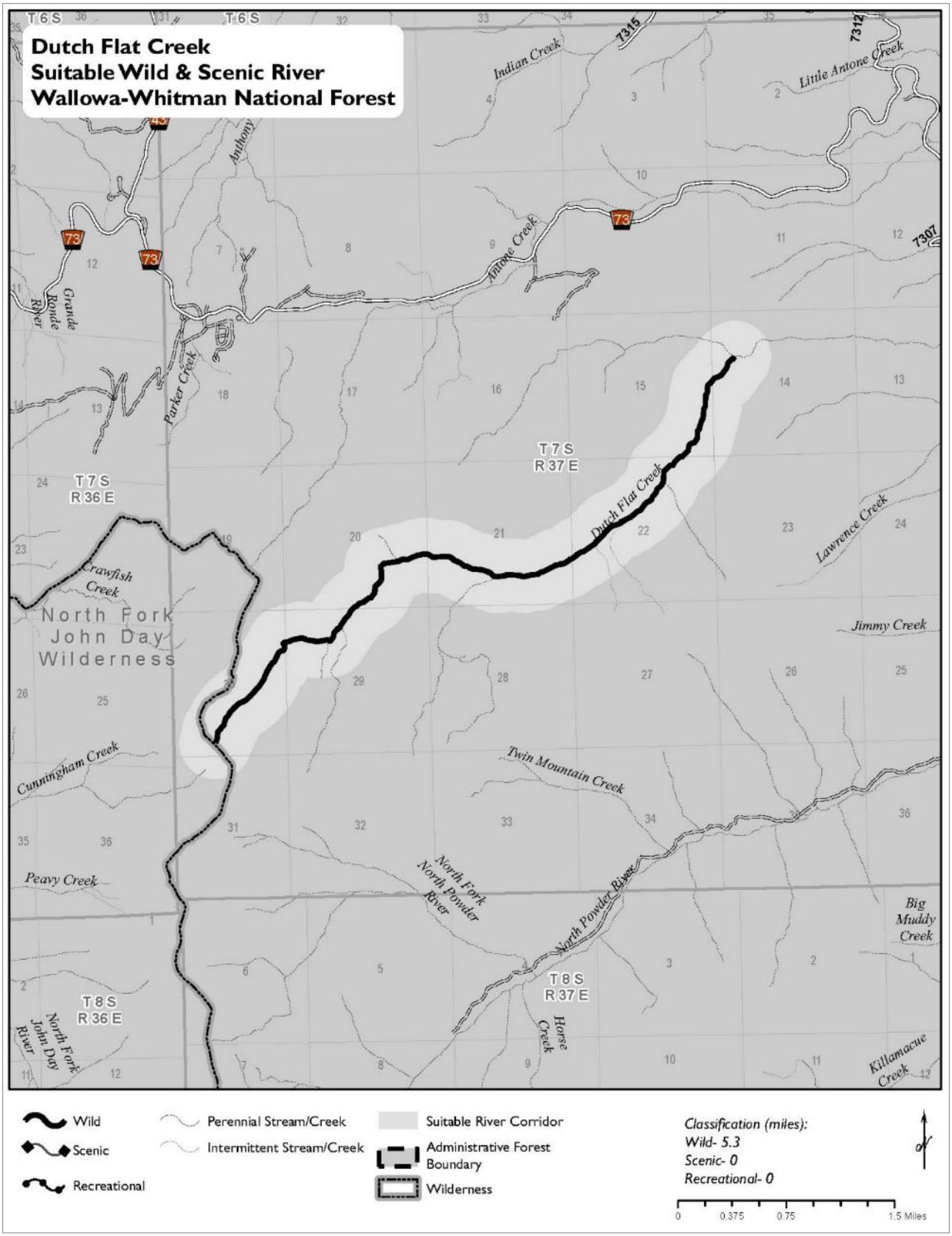

Figure D-11. Dutch Flat Creek suitable wild and scenic river, Wallowa-Whitman National Forest

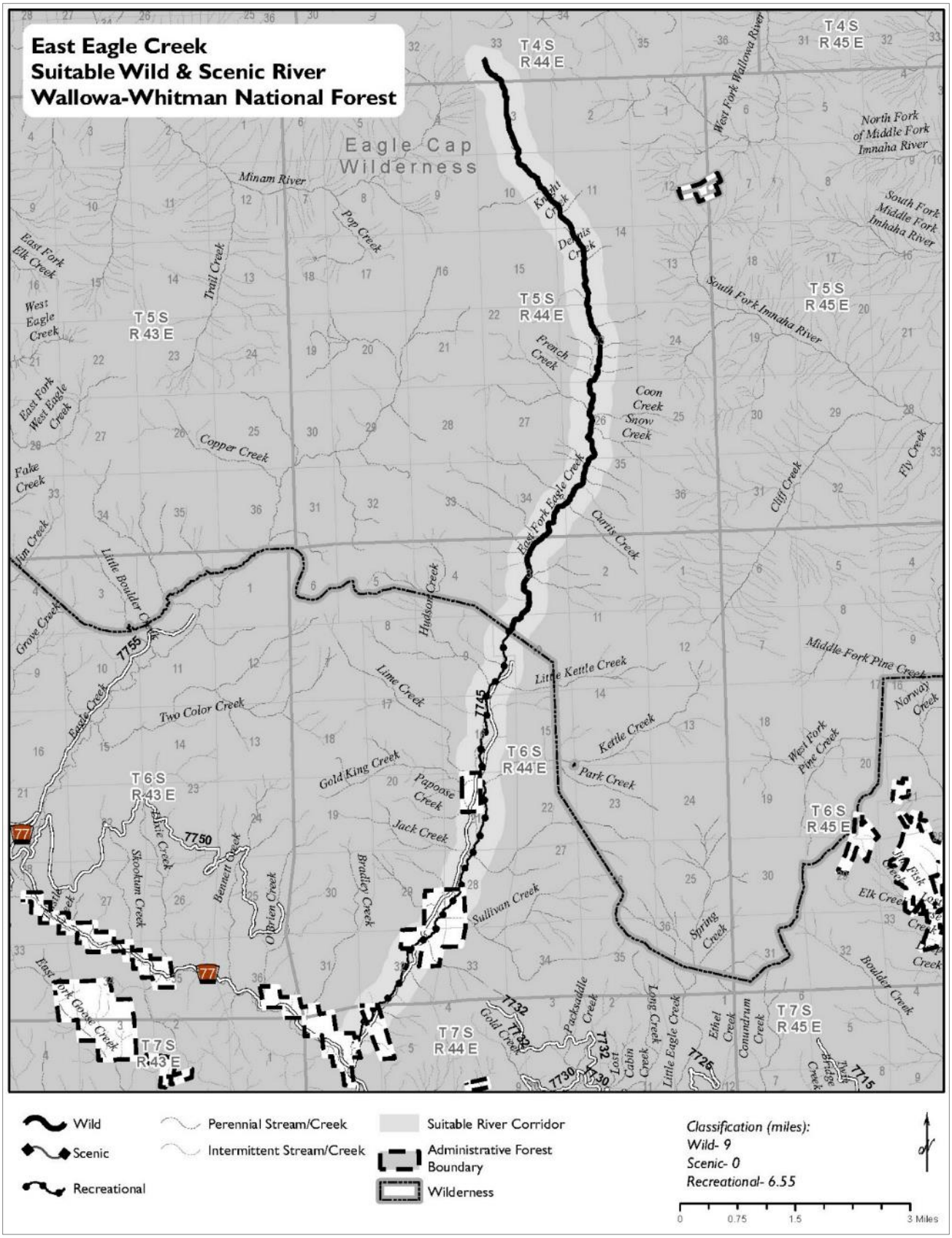

Figure D-12. East Eagle Creek suitable wild and scenic river, Wallowa-Whitman National Forest

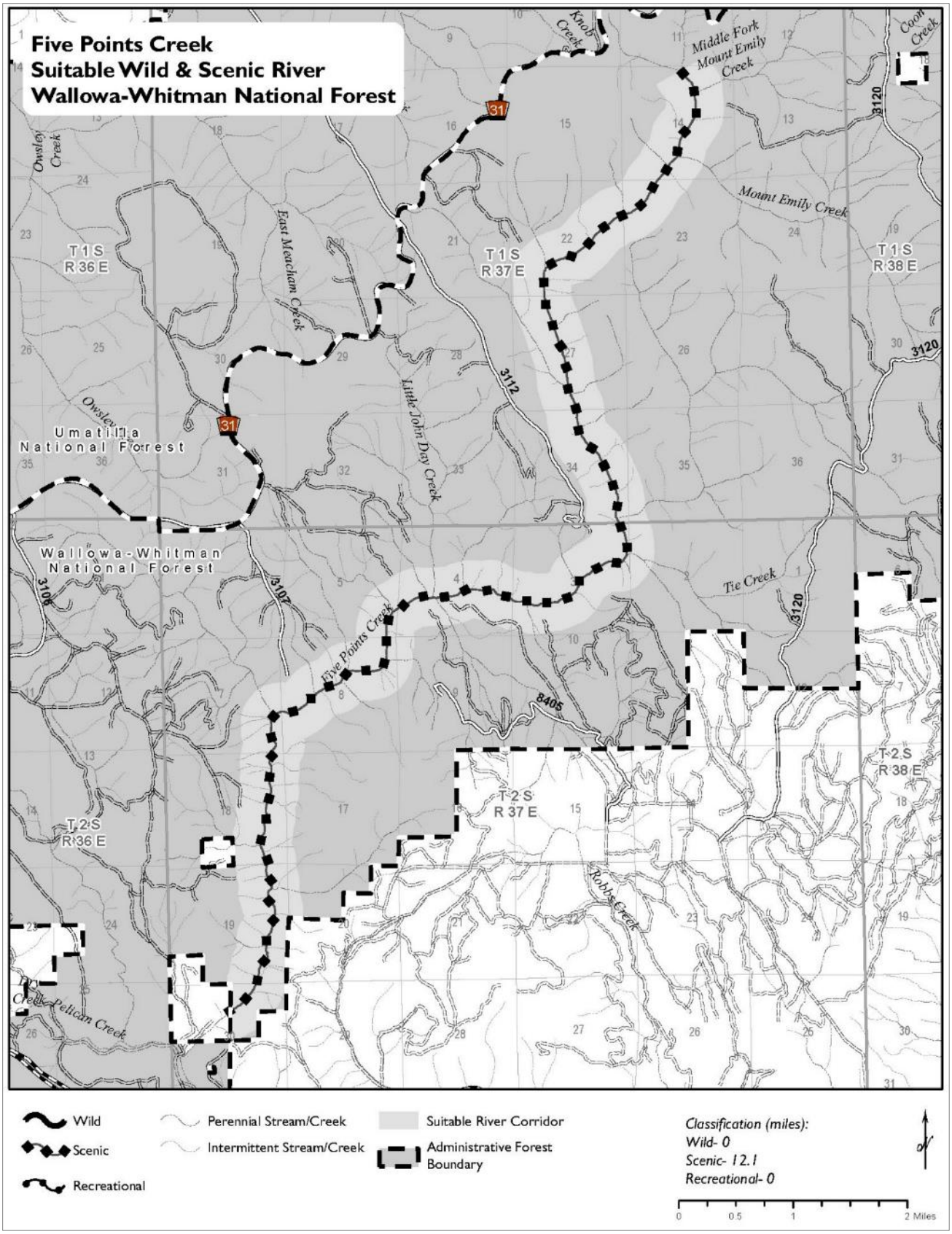

Figure D-13. Five Points Creek suitable wild and scenic river, Wallowa-Whitman National Forest

Appendix E: Wilderness Evaluation

Introduction

When revising a Forest Plan, the national forests are required by the National Forest Management Act (NFMA) to evaluate potential wilderness areas and to determine whether these areas should be recommended to Congress for wilderness designation. This document describes the process used to evaluate the wilderness potential of 76 areas within the Blue Mountains forests plan revision area.

The forest plan revision team determined suitability of potential wilderness areas for Wilderness designation by evaluating capability, availability and need. There were are 76 potential wilderness areas identified within the Blue Mountains national forests, and each was evaluated for these attributes. The Wilderness Need Evaluation (March 25, 2010) was completed for the entire Blue Mountains forests plan revision area and many of these areas were determined to have capacity and availability for wilderness designation; however, a need was not identified to be present. While an area may not 'need' to be formally designated to protect resources, there may be other reasons for proposing designation. Political and social factors also play a part in deciding whether to propose areas for inclusion in the wilderness system; these factors are not addressed in this evaluation.

The following documents are available in the project record and provide more detailed information on the wilderness evaluation:

- Wilderness Area Need Evaluation (March 2010)
- Malheur National Forest Review of Areas with Wilderness Potential (March 2010)
- Umatilla National Forest Review of Areas with Wilderness Potential (March 2010)
- Wallowa-Whitman National Forest Review of Areas with Wilderness Potential (March 2010)

Potential Wilderness Areas

The analysis first examined the current inventoried roadless areas (areas identified in Appendix C, Inventoried Roadless Areas, of each national forest's 1990 Land and Resource Management Plan Final Environmental Impact Statement) to determine if these areas met the criteria for potential wilderness areas. Some areas in the inventory did not meet the criteria for wilderness designation. In addition, the remaining forest system lands in the three forests were examined to see if there are other areas with wilderness potential. Several areas were found that met the wilderness criteria stipulated in Forest Service Handbook (FSH) 1909.12 71.1 – Inventory Criteria. Both these efforts followed direction outlined in the implementing regulations for the National Forest Management Act (36 CFR 219.18) and Forest Service Handbook (FSH 1909.12, Chapter 70) which states: "Areas qualify for placement on the potential wilderness inventory if they meet the statutory definition of wilderness. Include areas that meet either criteria 1 and 3, or criteria 2 and 3 below.

1. Areas contain 5,000 acres or more.
2. Areas contain less than 5,000 acres, but can meet one or more of the following criteria:
    - Areas can be preserved due to physical terrain and natural conditions;

- Areas are self-contained ecosystems, such as an island, that can be effectively managed as a separate unit of the National Wilderness Preservation System; and
- Areas are contiguous to existing wilderness, primitive areas, administration-endorsed wilderness, or potential wilderness in other Federal ownership, regardless of their size.

3. Areas do not contain forest roads (36 CFR 212.1) or other permanently authorized roads, except as permitted in areas east of the 100th meridian (sec. 71.12)."

All areas meeting the criteria for wilderness designation were considered potential wilderness areas and evaluated as possible recommendations for designation as wilderness.

Through this process, 76 potential wilderness areas were identified within the Blue Mountains national forests. These areas cover 705,310 acres or 13 percent of the National Forest System lands. Refer to individual forests Review of Areas with Wilderness Potential for a complete list of each of the 76 areas by national forest.

Suitability Analysis

Three tests—capability, availability, and need—were used to determine suitability as described in Forest Service Handbook 1909.12, chapter 70. In addition to the inherent wilderness qualities an area might possess, the area must provide opportunities and experiences that are dependent on and enhanced by a wilderness environment. The area and boundaries must allow the area to be managed as wilderness.

- Capability is the degree to which the area contains the basic characteristics that make it suitable for wilderness recommendation without regard to its availability for or need as wilderness. All areas that are determined to be capable are evaluated for availability. (FSH 1909.12 Chapter 70 subpart 72.1)
- Availability of the area for wilderness designation is conditioned by the value of and need for wilderness resource compared to the value of and need for other resources. (FSH 1909.12 Chapter 70, subpart 72.2)
- Need for wilderness designation is determined through an analysis of the degree to which an area contributes to the National Wilderness Preservation System based on several factors on both a regional and a local basis. (FSH 1909.12 Chapter 70 subpart 72.3)

Capability and Availability Evaluation

Capability

Determining the capability of an area to provide a wilderness experience considers elements, activities, or features that describe the basic characteristics of wilderness. Criteria were established to consider existing as well as future conditions within and adjacent to the inventoried roadless area.

The five basic characteristics identified in FSH 1909.12, Chapter 70 to evaluate the capability of an area are natural, undeveloped, outstanding opportunities for solitude or primitive and unconfined recreation, special features and values, and manageability.

The environment provides the person the opportunity to feel or experience solitude and serenity, a spirit of adventure and awareness, and a sense of self-reliance. The area should appear natural and free from disturbance and where the normal activities and life cycles of biotic species take place.

A range of geological, biological, and ecological variability exists and is identified. Any scientific, educational, or historical values are identified and considered. Social and economic factors must blend with the environment and natural features to make the area desirable and manageable as wilderness.

Outdoor recreation opportunities that are primitive and unconfined include hiking, backpacking, stock riding, hunting, fishing, skiing, snowshoeing, and rafting. These may or may not currently exist within an individual area. Other outdoor recreational activities may currently exist but are not compatible with a wilderness setting or other wilderness characteristics.

Special features recognize scientific, educational, historical, and scenic values found in the area. The abundance and variety of wildlife and fish, including threaten and endangered species, will be considered. Other special features that are unique or are outstanding will be identified.

Manageability considers the ability to manage the area as wilderness as required by the 1964 Wilderness Act. Such factors as size, shape, and juxtaposition to external situations are considered. Boundary location and the ability to easily identify the boundary on the ground are critical in meeting this characteristic.

There are many combinations of basic natural characteristics, and no two areas possess any of these characteristics in the same measure. The process, then, is to analyze the quality and quantity of these characteristics and determine if they can be provided by establishing management, protective, mitigation, or enhancement measures.

To evaluate each of the five basic characteristics, individual elements, activities, or features were developed that are descriptive of these characteristics and provide a basis for rating. Criteria were established to consider existing as well as future conditions both inside and adjacent to the area, and are rated as high, medium, or low depending on how well the criterion is or can be met in the area.

Availability

Availability of an area for wilderness management must be evaluated against other resource needs, demands, and uses of the area. To be available for wilderness, the wilderness value, both tangible and intangible, should offset the value of the other resources. The predominant value does not necessarily reflect the use or combination of uses that would yield the greatest dollar return or the greatest unit output. In evaluating other resources, current uses, trends, and potential future uses and outputs need to be considered.

Constraints and encumbrances on lands may also govern the availability of lands for wilderness. Forest Service control over the surface and subsurface of the area is a consideration regarding availability. The Forest Service should have sufficient control to prevent development of irresolvable, incompatible uses that would negatively affect wilderness characteristics and potential.

Other resources evaluated are determined from resource specialists' knowledge of the areas and public comments. Once the resources were identified, criteria were established for evaluation. Forest and district resource specialists rated the criteria as high, medium, or low. Forest program managers and plan revision interdisciplinary team members then evaluated each area's availability for wilderness designation.

Need

Evaluation of need determines the degree to which an area can contribute to the overall National Wilderness Preservation System. There should be evidence of current or future public need for additional designated wilderness in the general vicinity of the area being considered. Need analysis uses such factors as the geographic distribution of areas, representations of landforms and ecosystems, and the presence of wildlife expected to be present in a wilderness environment.

Evaluation Findings

Potential wilderness is based on the inherent wilderness quality determined in the capability, availability, and needs assessment. In addition to the inherent wilderness quality an area might possess, the area should provide opportunities and experiences one would expect to find in a wilderness environment. Potential wilderness management considers establishing boundaries that are easy to define and locate on the ground. Forest land managers reviewed the evaluation and determined which areas to recommend for wilderness designation.

Potential wilderness boundaries and mapping was completed following the guidelines in FSH 1909.12, Chapter 70 for each area recommended for wilderness designation. Boundaries should be easy to define, locatable on the ground, and be manageable. Determination of a recommended wilderness boundary uses the following guidelines (in descending order of desirability).

1. Use natural features locatable on both a map and on the ground, such as a ridge top, mountain peak, or lake shore;
2. Use semi-permanent human-made features such as roads and power lines. The boundary may be set back a given distance from these features;
3. Use previously surveyed lines or legally determined lines such as section and township lines, property lines, or state boundaries
4. Use a straight line from one locatable, visible point to another, such as between two mountain peaks; and
5. Use a series of bearings and distances between locatable points that are not visible.

Evaluation of the 76 areas for potential wilderness and recommendation was based on the methodology established above

Capability Process

Capability analysis consisted of completing rating for elements, activities, or features that describe the five basic characteristics outlined in FSH 1909.12, Chapter 70 (1982). Forest plan revision interdisciplinary team members, recreation program managers, environmental analysis specialists, and forest planners prepared the ratings.

The five basic characteristics were broken down into 18 elements, activities, or features. Further criteria were used to help inform the rating responses for each of the 18 broader elements. Generally, the criteria are listed in order of priority for each element, activity, or feature. Criteria were established to consider existing as well as future conditions both inside and adjacent to an area.

Evaluation of the criteria was performed by district recreation managers, Forest Service fish and wildlife biologists, and hydrologists. Each criterion was rated as high, medium, or low. For areas

that crossed national forest boundaries, the evaluation was conducted on each individual national forest.

Forest Service wilderness program managers and district personnel rated the 19 elements, activities, or features. Areas were rated as high, medium, or low in capability. Table E-1 shows the 18 elements, activities and features and the criteria used to rate the areas.

Table E-1. Area capability assessment criteria

High	Moderate	Low
Environmental Elements		
Opportunity for Solitude		
• Feeling of being alone or remote from civilization. • The possibility of meeting another party is remote. • Recreation use is light.	• Feeling of being alone is possible but signs of civilization are likely. • The possibility of meeting or not meeting another party is about equal. • Recreation use is moderate.	• Little opportunity of feeling alone. • It would be rare NOT to meet another party. • Recreation use is high.
Natural Integrity of the Area		
• Free of human disturbance, or appears to be natural. • Area visible (outside of the area) human disturbances do not dominate the view. • Only minor improvements such as a trail. • Noxious weeds not evident	• Mostly free of human disturbance, Natural Disturbance evident but does not dominate the area. • Area visible (outside of the area) has signs of human activities such as roads or structures. • Several minor improvements. • Noxious weeds evident in isolated spots	• Signs of human disturbances, natural disturbance dominates the landscape, such as a stand replacing wildfire. • Area visible in surrounding foreground shows obvious human activity such as clearcuts or a town. • Major improvements such as a powerline, dam or road. • Noxious weeds common or scattered throughout the area
Provides Challenge and Adventure		
• Terrain generally rugged. • Requires above average physical ability, knowledge, or skill to recreate safely in the area.	• Terrain typical for general forest area. • Requires similar physical ability, knowledge, or skill as the general forested area.	• Terrain more gentle and rolling. • Area easily accessible; requires average physical ability, limited knowledge and skill as compared to the abilities required in the general forested area.
Primitive Outdoor Recreation Opportunities		
Hiking Opportunities		
• Two or more trails, class 3 or higher, routinely maintained. • Terrain is gentle and vegetation open to allow easy cross-country travel.	• At least one trail, class 2 or higher, routinely maintained. • Terrain that is moderate or vegetation brushy that impedes cross-country travel.	• No system trails that are maintained. • Terrain is steep or vegetation too dense that cross-country travel is difficult.

High	Moderate	Low
Backpacking Opportunities		
• Two or more trails, class 3 or higher, routinely maintained. • Area has several dispersed campsites that are routinely used.	• At least one trail, class 2 or higher, routinely maintained. • Area has at least one dispersed campsite that is occasionally used.	• No system trails that are maintained. • Area does not have dispersed campsites, but progressive camping may occur.
Horseback Riding/Saddle Stock		
• At least one trail, class 3 or higher, designed for saddle stock and routinely maintained. • Trailhead with stock facilities, such as unloading ramp.	• At least one trail, class 2 or higher, suitable for saddle stock and routinely maintained. • Trailhead has room to turn around stock truck or stock trailer.	• No system trails that are maintained. • Trailhead does not support use of stock.
Hunting		
• Good populations of the big game animals or fair population of permitted animals such as bighorn sheep or mountain goats. • Terrain is gentle and vegetation open to allow easy hunting access off trails and ridges.	• Fair populations of game animals. • Terrain is moderately steep or vegetation brushy that limits hunting on much of the area.	• Has scattered small herds of big game animals. • Terrain is steep or vegetation too dense that hunting is limited to trails or ridges.
Fishing		
• Good populations of native game fish. • Stream bottoms are generally gentle with minor brush allowing access to water.	• Fair populations of native game fish. • Stream channel has enough brush to limit access; channel bottom or side slopes not overly steep.	• Low populations of native game fish. • Stream channel steep, or steep rocky side slopes, or brush along channel makes access difficult.
Cross-country Skiing/Snowshoeing		
• Terrain is gentle and vegetation open to allow easy cross-country travel. • Area is easily accessible in winter by motorized wheeled vehicles.	• Terrain is moderate or vegetation brushy that impedes cross-country travel. • Snow keeps wheeled vehicles several miles from area but access is possible by snowmobile.	• Terrain is steep, or vegetation too dense that cross-country travel is difficult. • Area difficult or rarely accessed by snowmobile
Special Features		
Unique Fish, Wildlife, Plants and/or Plant Associations		
• Diverse community of native mammals, birds and fish. • There is a known high variety of threatened, endangered and sensitive species within the area. • Overall habitat integrity rating of high. • Provides critical linkage between wildlife areas or habitats.	• Moderate variety of native mammals, birds and fish. • There is a known moderate variety of threatened, endangered and sensitive species within the area. • Overall habitat integrity rating of moderate. • Provides linkage between wildlife areas or habitats.	• Community of native mammals, birds and fish is not diverse. • There is a known low variety of threatened, endangered and sensitive species within the area. • Overall habitat integrity rating of low. • Does not provide linkage between wildlife areas or habitats.

High	Moderate	Low
Potential or Existing Research Natural Area		
• Area contains an established special area such as a research natural area.	• Area contains a candidate or eligible research natural area.	• Area does not contain potential or eligible area for research natural area.
Scenic Features		
• Area has peaks or rocky formations considered spectacular from the rest of the Forest and/or special vegetative features that are considered very scenic.	• Area has a peak or formation that stands out from surrounding terrain and/or vegetative features considered scenic.	• Terrain is typical of the forest or surrounding area and the vegetation is common to the surrounding area.
Significant Cultural Resources		
• IRA contains several historic or prehistoric areas or sites such as those eligible as National Register Historic Sites. • Identified values are unique to the Blue Mountain area.	• IRA contains at least one historic or prehistoric area or site such as those eligible as National Register Historic Sites. • Identified values are common in Northwestern U.S., but are uncommon in the Blue Mountain area.	• IRA contains no historic or prehistoric areas or sites such as those eligible as National Register Historic Sites. • Identified values are common to the northwest U.S. and to the Blue Mountain area.
Manageable Boundaries		
Recognizable Boundaries or conform to terrain		
• Vast majority of boundary follows features that can be identified on the ground such as dominant ridge, creek, road or trail. • Boundary can be easily adjusted to follow locatable and identifiable features without significantly modifying the area boundaries.	• More than half of the boundary follows a feature that can be easily found on the ground. • Boundary can be adjusted to follow locatable and identifiable features but will modify the general size and shape of the IRA. Boundary may be identified with minimal signing.	• Boundary generally lies across the hillside and can rarely be located without equipment, such as GPS unit. • Boundary cannot be adjusted to follow locatable and identifiable features, or requires extensive signing.
Boundary isolates area from Influence by outside activities		
• Area accessed by trail or closed and revegetated road; adjacent area has natural setting. • No active disturbance near boundary. • Natural processes take place undisturbed and unmanipulated.	• May be accessed by narrow or two track open road that is lightly traveled; minimal human presence is evident. • May have disturbance near boundary, but it is short term such as a logging operation. • Minimal disturbance of natural processes.	• Boundary adjacent to heavily used road or along area showing high human presence, such as private lands with structures or cultivated land. • Boundary adjacent to long-term disturbance like farmland or mining operations. • Natural processes cannot occur without human intervention.

High	Moderate	Low
Boundaries are Manageable		
• Boundary total on National Forest and not adjacent to private lands. • No inholdings.	• Boundary follows property line forming irregular shape. • Few small inholdings may be present.	• Boundary crosses private property so there are inholdings along the boundary. • Several small or large inholdings.
Boundaries are a barrier to prohibited uses		
• Topographic features provide a natural barrier, such as major stream of steep hillside. • Human improvement is significant to physically provide a barrier, such as a road cut slope.	• Topography generally makes it difficult to participate in prohibited uses. • Human improvement places user on notice of prohibited use, such as a sign.	• Topography not a deterrent to prohibited uses. • Human improvement not a deterrent; may provide a point of access of prohibited uses.

Capability Results

Using these criteria, the capability assessment for the Blue Mountains national forests are displayed in the following tables. Capability ratings are informed and supplemented by narratives that provide additional detail for each area including an area overview and area characteristics (see Malheur National Forest Review of Areas with Wilderness Potential, 2010; Umatilla National Forest Review of Areas with Wilderness Potential, 2010; and Wallowa-Whitman National Forest Review of Areas with Wilderness Potential, 2010). Narratives are available in the project record and on the Blue Mountains plan revision website.

Table E-2. Area capability assessment criteria for the Malheur National Forest (Aldrich Mountain, Baldy Mountain, Cedar Grove, Dixie Butte, Dry Cabin, Glacier Mountain)

Evaluation Criteria/Area Name	Aldrich Mountain	Baldy Mountain	Cedar Grove	Dixie Butte	Dry Cabin	Glacier Mountain
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	High	High	Moderate	Moderate	High	High
Natural integrity, area is free from disturbance	High	High	High	Low	High	Moderate
Overall	**High**	**High**	**High**	**Moderate**	**High**	**High**
Challenge						
Provides outstanding opportunities for challenge and adventure	High	Moderate	Low	Moderate	High	Low
Outdoor Recreation Opportunity*						
Hiking	Low	Low	High	High	Low	High
Backpacking	Low	Low	Low	High	Low	Moderate
Horseback riding/saddle stock	Low	Low	Low	Moderate	Low	Moderate
Fishing	Moderate	Moderate	Low	Moderate	Moderate	Low
Hunting	Moderate	Moderate	Low	High	High	Moderate
Cross-country skiing/Snowshoeing	N/A	N/A	Low	Moderate	N/A	Moderate
Overall	**Low**	**Low**	**Low**	**Moderate**	**Moderate**	**Moderate**
Special Features						
Unique fish and wildlife species	Low	High	Low	Low	High	Moderate
Unique plants or plant communities	Low	Low	High	Moderate	Moderate	Low
Potential or existing Research Natural Areas	N/A	N/A	N/A	High	N/A	N/A
Outstanding landscape features	High	Moderate	Low	Low	Moderate	Low
Significant cultural resource sites	Low	Low	Low	Low	Moderate	Low
Overall	**Low**	**Low**	**Low**	**Low**	**Moderate**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	High	High	Low	Low	High	Moderate
Boundary isolates area from Influence by outside activities	Moderate	High	Moderate	Low	High	Moderate
Boundaries are manageable	Moderate	Moderate	Moderate	Moderate	Moderate	Low
Boundaries constitute a barrier to prohibited use	Moderate	Moderate	Low	Low	Moderate	Low
Overall	**Moderate**	**Moderate**	**Low**	**Low**	**High**	**Moderate**
CAPABILITY RATING OVERALL	**Moderate**	**Moderate**	**Low**	**M/L**	**M/H**	**Moderate**

Table E-3. Area capability assessment criteria for the Malheur National Forest (Greenhorn Mountain, Jumpoff Joe, Malheur River, McClellan Mountain, Myrtle Silvies, Nipple Butte)

Evaluation Criteria/Area Name	Greenhorn Mountain.	Jumpoff Joe	Malheur River	McClellan Mtn.	Myrtle Silvies	Nipple Butte
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Moderate	Low	Moderate	Moderate	Moderate	Moderate
Natural integrity, area is free from disturbance	Moderate	Low	High	High	Moderate	High
Overall	**Moderate**	**Low**	**Moderate**	**High**	**Moderate**	**Moderate**
Challenge						
Provides outstanding opportunities for challenge and adventure	Low	Low	High	Moderate	Moderate	Low
Outdoor Recreation Opportunity*						
Hiking	Moderate	High	High	High	High	Moderate
Backpacking	Low	High	High	High	High	Moderate
Horseback riding/saddle stock	Low	High	High	High	High	Low
Fishing	Moderate	High	High	High	Moderate	Moderate
Hunting	Moderate	High	High	High	High	High
Cross-country skiing/Snowshoeing	High	High	N/A	Moderate	N/A	N/A
Overall	**Moderate**	**High**	**High**	**High**	**High**	**Moderate**
Special Features						
Unique fish and wildlife species	High	Low	High	Low	Moderate	Low
Unique plants or plant communities	High	Moderate	High	Moderate	Low	Low
Potential or existing Research Natural Areas	Moderate	N/A	N/A	High	N/A	Low
Outstanding landscape features	High	Moderate	High	Moderate	Low	Low
Significant cultural resource sites	Moderate	Low	High	Moderate	Low	Low
Overall	**High**	**Low**	**High**	**Moderate**	**Low**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	Moderate	Moderate	Low	Low	Low	Moderate
Boundary isolates area from Influence by outside activities	Moderate	Low	Low	Moderate	Low	Moderate
Boundaries are manageable	Low	Low	Moderate	Moderate	Low	Low
Boundaries constitute a barrier to prohibited use	Low	Low	Low	Low	Low	Low
Overall	**Low**	**Low**	**Low**	**Low**	**Low**	**Low**
CAPABILITY RATING OVERALL	**Mod./Low**	**Moderate**	**Moderate**	**Moderate**	**Low**	**Low**

Table E-4. Area capability assessment criteria for the Malheur National Forest (Pine Creek, Shake Table, Strawberry Mtn. Additions, Utley Butte)

Evaluation Criteria/Area Name	Pine Creek	Shaketable	Strawberry Mountain Additions	Utley Butte
Environmental				
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	High	Low	Moderate	Moderate
Natural integrity, area is free from disturbance	Moderate	Low	High	Moderate
Overall	**High**	**Low**	**M/H**	**Moderate**
Challenge				
Provides outstanding opportunities for challenge and adventure	Low	Moderate	High	Moderate
Outdoor Recreation Opportunity*				
Hiking	Moderate	Moderate	Low	Low
Backpacking	Low	Low	Low	Low
Horseback riding/saddle stock	Low	Low	Low	Low
Fishing	Moderate	Low	Low	Moderate
Hunting	Moderate	Moderate	High	Moderate
Cross-country skiing/Snowshoeing	N/A	N/A	Low	N/A
Overall	**Moderate**	**Low**	**Low**	**Low**
Special Features				
Unique fish and wildlife species	Low	Moderate	Low	Moderate
Unique plants or plant communities	Low	Moderate	Low	Moderate
Potential or existing Research Natural Areas	Low	High	Low	Low
Outstanding landscape features	Low	Low	Moderate	Low
Significant cultural resource sites	Low	Low	Low	Low
Overall	**Low**	**Moderate**	**Low**	**Low**
Manageability				
Boundaries are recognizable/conform with terrain	Low	Moderate	Low	High
Boundary isolates area from Influence by outside activities	Low	Moderate	Low	Low
Boundaries are manageable	Low	Moderate	Low	Low
Boundaries constitute a barrier to prohibited use	Low	Low	Moderate	Low
Overall	**Low**	**Moderate**	**Low**	**Low**
CAPABILITY RATING OVERALL	**Low**	**Moderate**	**Moderate**	**Low**

Table E-5. Area capability assessment criteria for the Umatilla National Forest (Asotin Creek, Grande Ronde, Greenhorn Mountain, Hellhole, Horseshoe Ridge, Jumpoff Joe)

Evaluation Criteria/Area Name	Asotin Creek	Grande Ronde	Greenhorn Mtn.	Hellhole	Horseshoe Ridge	Jumpoff Joe
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Moderate	Moderate	Moderate	Moderate	Moderate	Low
Natural integrity, area is free from disturbance	High	High	Moderate	High	High	Low
Overall	**High**	**High**	**Moderate**	**High**	**High**	**Low**
Challenge						
Provides outstanding opportunities for challenge and adventure	Moderate	Moderate	Low	High	Low	Low
Outdoor Recreation Opportunity*						
Hiking	Moderate	Low	Moderate	Moderate	Low	High
Backpacking	Low	Low	Low	Moderate	Low	High
Horseback riding/saddle stock	Low	Low	Low	Moderate	Low	High
Fishing	Low	High	Moderate	Moderate	Low	High
Hunting	Moderate	Low	Moderate	Moderate	Moderate	High
Cross-country skiing/Snowshoeing	N/A	N/A	High	N/A	Low	High
Overall	**Moderate**	**Low**	**Moderate**	**Moderate**	**Low**	**High**
Special Features						
Unique fish and wildlife species	Moderate	High	High	Moderate	Low	Low
Unique plants or plant communities	Moderate	Moderate	High	Moderate	Low	Moderate
Potential or existing Research Natural Areas	Low	Low	Moderate	Low	Low	Low
Outstanding landscape features	Moderate	High	High	Low	Low	Moderate
Significant cultural resource sites	Low	Low	Moderate	Low	Moderate	Low
Overall	**Moderate**	**Moderate**	**High**	**Moderate**	**Low**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	High	High	Moderate	High	High	Moderate
Boundary isolates area from Influence by outside activities	High	High	Moderate	High	Low	Low
Boundaries are manageable	High	High	Low	High	Moderate	Low
Boundaries constitute a barrier to prohibited use	High	High	Low	High	High	Low
Overall	**High**	**High**	**Low**	**High**	**Moderate**	**Low**
CAPABILITY RATING OVERALL	**Moderate**	**Moderate**	**M/L**	**High**	**M/L**	**Moderate**

Table E-6. Area capability assessment criteria for the Umatilla National Forest (Lookingglass, Meadow Creek, Mill Creek, North Fork John Day Additions, North Fork Umatilla Additions, North Mt. Emily)

Evaluation Criteria/Area Name	Lookingglass	Meadow Creek	Mill Creek	North Fork John Day Additions	NF Umatilla Additions	North Mt. Emily
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Moderate	Low	High	Low	Moderate	Low
Natural integrity, area is free from disturbance	Moderate	Moderate	High	High	Moderate	Moderate
Overall	**Moderate**	**Low**	**High**	**Moderate**	**Moderate**	**Low**
Challenge						
Provides outstanding opportunities for challenge and adventure	Moderate	Low	High	Low	Moderate	Low
Outdoor Recreation Opportunity*						
Hiking	High	Moderate	Low	Low	Moderate	Low
Backpacking	High	Moderate	Low	Low	Low	Low
Horseback riding/saddle stock	High	Moderate	Low	Low	Low	Low
Fishing	High	High	Low	Low	Low	Low
Hunting	High	High	High	High	High	Moderate
Cross-country skiing/Snowshoeing	High	Low	N/A	Low	N/A	Moderate
Overall	**High**	**Moderate**	**Low**	**Low**	**Moderate**	**Low**
Special Features						
Unique fish and wildlife species	Moderate	Moderate	Low	Low	Low	Low
Unique plants or plant communities	Moderate	Moderate	Moderate	Low	Low	Low
Potential or existing Research Natural Areas	Low	Low	Moderate	Low	Low	Low
Outstanding landscape features	Low	Low	Low	Low	Low	Moderate
Significant cultural resource sites	Low	Low	Low	Low	Low	Low
Overall	**Low**	**Low**	**Low**	**Low**	**Low**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	Moderate	Moderate	High	High	Moderate	High
Boundary isolates area from Influence by outside activities	Low	Low	High	Moderate	Moderate	Low
Boundaries are manageable	Moderate	Moderate	High	High	Moderate	High
Boundaries constitute a barrier to prohibited use	Low	Low	High	Moderate	Moderate	Low
Overall	**Low**	**Low**	**High**	**High**	**Moderate**	**Moderate**
CAPABILITY RATING OVERALL	**Moderate**	**Low**	**Moderate**	**Moderate**	**Moderate**	**Low**

Table E-7. Area capability assessment criteria for the Umatilla National Forest (Owsley, Potamus, Skookum, South Fork/Tower, Spangler, Squaw/Little Fly)

Evaluation Criteria/Area Name	Owsley	Potamus	Skookum	South Fork/Tower	Spangler	Squaw/ Little Fly
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Moderate	Moderate	Low	Low	Moderate	Low
Natural integrity, area is free from disturbance	Moderate	Low	Moderate	Low	Moderate	Low
Overall	**Moderate**	**Moderate**	**Moderate**	**Low**	**Moderate**	**Low**
Challenge						
Provides outstanding opportunities for challenge and adventure	Moderate	Low	Low	Low	Low	Low
Outdoor Recreation Opportunity*						
Hiking	Low	Low	Low	Low	Low	High
Backpacking	Low	Low	Low	Low	Low	Moderate
Horseback riding/saddle stock	Low	Low	Low	Low	Low	Moderate
Fishing	Moderate	low	Low	Low	Moderate	Low
Hunting	Low	Moderate	Moderate	High	Moderate	High
Cross-country skiing/Snowshoeing	Low	Low	Low	Low	Moderate	N/A
Overall	**Low**	**Low**	**Low**	**Low**	**Moderate**	**Moderate**
Special Features						
Unique fish and wildlife species	Moderate	Moderate	Moderate	Moderate	Moderate	Low
Unique plants or plant communities	Low	Low	Low	Low	Low	Low
Potential or existing Research Natural Areas	Low	Low	Low	Low	Low	Low
Outstanding landscape features	Low	Moderate	Low	Low	Low	Low
Significant cultural resource sites	Low	Moderate	Low	Low	Low	Low
Overall	**Low**	**Moderate**	**Low**	**Low**	**Low**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	High	High	High	Moderate	High	Low
Boundary isolates area from Influence by outside activities	High	Low	Low	Low	Low	Low
Boundaries are manageable	High	Moderate	Moderate	Moderate	Moderate	Low
Boundaries constitute a barrier to prohibited use	Low	Low	Low	Low	Low	Low
Overall	**High**	**Moderate**	**Moderate**	**Low**	**Moderate**	**Low**
CAPABILITY RATING OVERALL	**Moderate**	**Moderate**	**Low**	**Low**	**Moderate**	**Low**

Table E-8. Area capability assessment criteria for the Umatilla National Forest (Texas Butte, Tiger Creek, Upper Tucannon, W-T Three)

Evaluation Criteria/Area Name	Texas Butte	Tiger Creek	Upper Tucannon	W-T Three
Environmental				
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Low	Moderate	Moderate	Moderate
Natural integrity, area is free from disturbance	Moderate	Moderate	Moderate	Moderate
Overall	**Moderate**	**Moderate**	**Moderate**	**Moderate**
Challenge				
Provides outstanding opportunities for challenge and adventure	Low	High	Moderate	Moderate
Outdoor Recreation Opportunity*				
Hiking	High	High	High	High
Backpacking	High	Moderate	High	High
Horseback riding/saddle stock	High	Moderate	High	High
Fishing	High	Low	Low	High
Hunting	High	High	High	High
Cross-country skiing/Snowshoeing	N/A	N/A	N/A	N/A
Overall	**High**	**Moderate**	**High**	**High**
Special Features				
Unique fish and wildlife species	Moderate	Moderate	High	High
Unique plants or plant communities	Low	Low	High	Low
Potential or existing Research Natural Areas	Low	Low	High	Low
Outstanding landscape features	Moderate	Low	High	High
Significant cultural resource sites	Low	Low	Moderate	Low
Overall	**Moderate**	**Low**	**High**	**Moderate**
Manageability				
Boundaries are recognizable/conform with terrain	High	Moderate	High	High
Boundary isolates area from Influence by outside activities	Low	Moderate	Moderate	High
Boundaries are manageable	Moderate	High	High	High
Boundaries constitute a barrier to prohibited use	Low	Moderate	Moderate	High
Overall	**Moderate**	**Moderate**	**Moderate**	**High**
CAPABILITY RATING OVERALL	**Moderate**	**Moderate**	**Moderate**	**High**

Table E-9. Area capability assessment criteria for the Umatilla National Forest (Walla Walla River, Wenatchee Creek, Willow Springs)

Evaluation Criteria/Area Name	Walla Walla River	Wenatchee Creek	Willow Springs
Environmental			
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Low	High	Low
Natural integrity, area is free from disturbance	High	High	Moderate
Overall	**Moderate**	**High**	**Moderate**
Challenge			
Provides outstanding opportunities for challenge and adventure	Moderate	High	Moderate
Outdoor Recreation Opportunity*			
Hiking	High	High	High
Backpacking	High	High	High
Horseback riding/saddle stock	High	High	High
Fishing	High	High	Low
Hunting	High	High	High
Cross-country skiing/Snowshoeing	N/A	N/A	N/A
Overall	**High**	**High**	**High**
Special Features			
Unique fish and wildlife species	High	Moderate	Moderate
Unique plants or plant communities	Moderate	Moderate	Low
Potential or existing Research Natural Areas	Low	Low	Low
Outstanding landscape features	Low	Low	Low
Significant cultural resource sites	Low	Low	Low
Overall	**Moderate/Low**	**Moderate**	**Low**
Manageability			
Boundaries are recognizable/conform with terrain	High	High	Moderate
Boundary isolates area from Influence by outside activities	Low	High	Low
Boundaries are manageable	High	High	Moderate
Boundaries constitute a barrier to prohibited use	Low	High	Low
Overall	**Moderate**	**High**	**Low**
CAPABILITY RATING OVERALL	**Moderate**	**High**	**Moderate**

Table E-10. Area capability assessment criteria for the Wallowa-Whitman National Forest (Beaver Creek, Big Canyon, Boulder Park/Little Eagle Meadows, Buckhorn, Castle Ridge, Cook Ridge)

Evaluation Criteria/Area Name	Beaver Creek	Big Canyon	Boulder Park/Little Eagle Meadows	Buckhorn	Castle Ridge	Cook Ridge
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	High	Low	Moderate	Low	Moderate	High
Natural integrity, area is free from disturbance	High	Low	Low	Moderate	Low	High
Overall	**High**	**Low**	**Moderate**	**Moderate**	**Moderate**	**High**
Challenge						
Provides outstanding opportunities for challenge and adventure	Low	High	Moderate	Low	Moderate	High
Outdoor Recreation Opportunity*						
Hiking	Moderate	Low	High	High	High	Low
Backpacking	Low	Low	High	High	Low	Low
Horseback riding/saddle stock	Moderate	Low	High	High	Low	Low
Fishing	Moderate	Low	Low	Low	Low	Low
Hunting	High	High	High	High	High	Moderate
Cross-country skiing/Snowshoeing	N/A	N/A	Moderate	Low	Moderate	N/A
Overall	**Moderate**	**Low**	**Moderate**	**High**	**Moderate**	**Low**
Special Features						
Unique fish and wildlife species	Low	Low	Moderate	Moderate	Moderate	Low
Unique plants or plant communities	Low	Moderate	Low	Low	Moderate	Low
Potential or existing Research Natural Areas	Low	Low	Low	Low	High	Low
Outstanding landscape features	Low	High	High	High	Moderate	Moderate
Significant cultural resource sites	Low	Moderate	Moderate	High	Low	Moderate
Overall	**Low**	**Moderate**	**Moderate**	**Moderate**	**Moderate**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	High	High	Moderate	Low	Moderate	High
Boundary isolates area from Influence by outside activities	Moderate	High	Low	Low	Low	High
Boundaries are manageable	High	High	Moderate	Low	Moderate	High
Boundaries constitute a barrier to prohibited use	Moderate	Low	Low	Low	Low	High
Overall	**High**	**High**	**Moderate**	**Low**	**Moderate**	**High**
CAPABILITY RATING OVERALL	**Moderate**	**Moderate**	**Moderate**	**Moderate**	**Moderate**	**Moderate**

Table E-11. Area capability assessment criteria for the Wallowa-Whitman National Forest (Deadhorse, Dunns Bluff, Grande Ronde, Greenhorn Mountain, Hellhole, Homestead)

Evaluation Criteria/Area Name	Deadhorse	Dunns Bluff	Grande Ronde	Greenhorn Mountain	Hellhole	Homestead
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Low	Moderate	Moderate	Moderate	Moderate	Low
Natural integrity, area is free from disturbance	Low	Low	High	Moderate	High	Low
Overall	**Low**	**Moderate**	**High**	**Moderate**	**High**	**Low**
Challenge						
Provides outstanding opportunities for challenge and adventure	Moderate	Low	Moderate	Low	High	Moderate
Outdoor Recreation Opportunity*						
Hiking	Low	Low	Low	Moderate	Moderate	Low
Backpacking	Low	Low	Low	Low	Moderate	Low
Horseback riding/saddle stock	Low	Low	Low	Low	Moderate	Low
Fishing	Low	Low	High	Moderate	Moderate	Low
Hunting	Moderate	Moderate	Low	Moderate	Moderate	Moderate
Cross-country skiing/Snowshoeing	N/A	N/A	N/A	High	N/A	N/A
Overall	**Low**	**Low**	**Low**	**Moderate**	**Moderate**	**Low**
Special Features						
Unique fish and wildlife species	Low	Low	High	High	Moderate	Low
Unique plants or plant communities	Low	Low	Moderate	High	Moderate	Low
Potential or existing Research Natural Areas	Low	Low	Low	Moderate	Low	Low
Outstanding landscape features	Low	Low	High	High	Low	Low
Significant cultural resource sites	Low	Low	Low	Moderate	Low	Low
Overall	**Low**	**Low**	**Moderate**	**High**	**Moderate**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	Low	Moderate	High	Moderate	High	Low
Boundary isolates area from Influence by outside activities	Low	Low	High	Moderate	High	Low
Boundaries are manageable	Low	Moderate	High	Low	High	Low
Boundaries constitute a barrier to prohibited use	Low	Low	High	Low	High	Low
Overall	**Low**	**Moderate**	**High**	**Low**	**High**	**Low**
CAPABILITY RATING OVERALL	**Low**	**Low**	**Moderate**	**M/L**	**High**	**Low**

Table E-12. Area capability assessment criteria for the Wallowa-Whitman National Forest (Huckleberry, Hurricane Creek, Imnaha Face, Joseph Canyon, Klopton-Corral Creek, Lake Fork)

Evaluation Criteria/Area Name	Huckleberry	Hurricane Creek	Imnaha Face	Joseph Canyon	Klopton-Corral Creek	Lake Fork
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	High	Low	Moderate	Moderate	Low	Low
Natural integrity, area is free from disturbance	High	Low	Moderate	Moderate	Low	Low
Overall	**High**	**Low**	**Moderate**	**Moderate**	**Low**	**Low**
Challenge						
Provides outstanding opportunities for challenge and adventure	Moderate	Low	Moderate	Moderate	High	Low
Outdoor Recreation Opportunity*						
Hiking	High	Low	High	High	Low	High
Backpacking	High	Low	High	High	Low	High
Horseback riding/saddle stock	High	Low	High	High	Low	High
Fishing	Low	Low	Moderate	Moderate	Low	High
Hunting	High	Low	High	High	High	High
Cross-country skiing/Snowshoeing	Moderate	Moderate	Moderate	Moderate	N/A	High
Overall	**Moderate**	**Low**	**High**	**High**	**Low**	**High**
Special Features						
Unique fish and wildlife species	Low	Moderate	Low	High	Low	Moderate
Unique plants or plant communities	Low	Low	Moderate	Moderate	Moderate	High
Potential or existing Research Natural Areas	Low	Low	Low	Low	Low	High
Outstanding landscape features	Low	Low	High	High	High	Moderate
Significant cultural resource sites	Low	Low	Low	High	Low	Low
Overall	**Low**	**Low**	**Moderate**	**High**	**Moderate**	**Moderate**
Manageability						
Boundaries are recognizable/conform with terrain	Moderate	Low	Moderate	Low	High	Moderate
Boundary isolates area from Influence by outside activities	Low	Low	Low	Moderate	High	Low
Boundaries are manageable	Moderate	Low	Low	Low	High	Moderate
Boundaries constitute a barrier to prohibited use	Low	Low	Moderate	Low	Low	Low
Overall	**Moderate**	**Low**	**Moderate**	**Low**	**High**	**Low**
CAPABILITY RATING OVERALL	**Moderate**	**Low**	**Moderate**	**Moderate**	**Moderate**	**Moderate**

Table E-13. Area capability assessment criteria for the Wallowa-Whitman National Forest (Lick Creek, Little Creek, Little Eagle Meadows, Little Sheep, Lord-Flat-Sommers Point, Marble Point)

Evaluation Criteria/Area Name	Lick Creek	Little Creek	Little Eagle Meadows	Little Sheep	Lord Flat-Sommers Point	Marble Point
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Moderate	Moderate	Moderate	Low	Moderate	Moderate
Natural integrity, area is free from disturbance	Moderate	Moderate	Low	Low	High	Moderate
Overall	**Moderate**	**Moderate**	**Moderate**	**Low**	**High**	**Moderate**
Challenge						
Provides outstanding opportunities for challenge and adventure	Moderate	Moderate	Moderate	Low	Moderate	Moderate
Outdoor Recreation Opportunity*						
Hiking	High	High	High	High	High	High
Backpacking	High	High	High	High	High	High
Horseback riding/saddle stock	High	High	High	High	High	High
Fishing	Moderate	Low	Low	Moderate	Moderate	Low
Hunting	High	High	High	High	High	High
Cross-country skiing/Snowshoeing	Moderate	Moderate	Moderate	High	N/A	N/A
Overall	**High**	**High**	**Moderate**	**High**	**High**	**High**
Special Features						
Unique fish and wildlife species	High	Low	Moderate	Low	Moderate	High
Unique plants or plant communities	Moderate	Moderate	Low	Low	Low	Low
Potential or existing Research Natural Areas	High	Low	Low	Low	Low	Low
Outstanding landscape features	High	Low	High	Low	High	Moderate
Significant cultural resource sites	High	Low	Moderate	Low	Low	Moderate
Overall	**High**	**Low**	**Moderate**	**Low**	**Low**	**Moderate**
Manageability						
Boundaries are recognizable/conform with terrain	High	Moderate	Moderate	Low	Moderate	High
Boundary isolates area from Influence by outside activities	High	Moderate	Low	Low	Low	High
Boundaries are manageable	High	Moderate	Moderate	Low	Moderate	High
Boundaries constitute a barrier to prohibited use	Low	Moderate	Low	Low	Low	Low
Overall	**High**	**Moderate**	**Moderate**	**Low**	**Low**	**High**
CAPABILITY RATING OVERALL	**High**	**Moderate**	**Moderate**	**Low**	**Moderate**	**Moderate**

Table E-14. Area capability assessment criteria for the Wallowa-Whitman National Forest (Monument Rock, Mountain Sheep, Mount Emily, North Mound Emily, Reservoir, Sheep Divide)

Evaluation Criteria/Area Name	Monument Rock	Mountain Sheep	Mount Emily	North Mount Emily	Reservoir	Sheep Divide
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Low	Low	Moderate	Low	Low	Moderate
Natural integrity, area is free from disturbance	Low	High	Moderate	Moderate	Low	Moderate
Overall	**Low**	**Moderate**	**Moderate**	**Low**	**Low**	**Moderate**
Challenge						
Provides outstanding opportunities for challenge and adventure	Low	High	Moderate	Low	Low	Low
Outdoor Recreation Opportunity*						
Hiking	High	High	High	Low	High	Low
Backpacking	High	Low	Low	Low	High	Low
Horseback riding/saddle stock	High	Low	Low	Low	High	Low
Fishing	Low	Low	Low	Low	Low	Low
Hunting	High	Moderate	Moderate	Moderate	High	Moderate
Cross-country skiing/Snowshoeing	N/A	N/A	Low	Moderate	High	Low
Overall	**High**	**Low**	**Low**	**Low**	**High**	**Low**
Special Features						
Unique fish and wildlife species	Low	Moderate	Low	Low	Low	Moderate
Unique plants or plant communities	Low	Low	Low	Low	Low	Low
Potential or existing Research Natural Areas	Low	Low	Low	Low	Low	Low
Outstanding landscape features	Low	Moderate	Low	Moderate	High	Low
Significant cultural resource sites	Low	Moderate	Low	Low	Low	Low
Overall	**Low**	**Moderate**	**Low**	**Low**	**Low**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	High	Moderate	Moderate	High	Moderate	Low
Boundary isolates area from Influence by outside activities	Low	Moderate	Low	Low	Low	Low
Boundaries are manageable	Moderate	Moderate	Moderate	High	Low	Low
Boundaries constitute a barrier to prohibited use	Low	Low	Low	Low	Low	Low
Overall	**Low**	**Moderate**	**Low**	**Moderate**	**Low**	**Low**
CAPABILITY RATING OVERALL	**Low**	**Moderate**	**Low**	**Low**	**Low**	**Low**

Table E-15. Area capability assessment criteria for the Wallowa-Whitman National Forest (Snake River, Squaw/Little Fly, Tope Creek, South Fork/Tower, Upper Catherine Creek)

Evaluation Criteria/Area Name	Snake River	Squaw (Little Fly)	Tope Creek	South Fork/Tower	Twin Mountain	Upper Catherine Creek
Environmental						
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Low	Low	Low	Low	Moderate	Moderate
Natural integrity, area is free from disturbance	Low	Low	Low	Low	Moderate	Moderate
Overall	**Low**	**Low**	**Low**	**Low**	**Moderate**	**Moderate**
Challenge						
Provides outstanding opportunities for challenge and adventure	Low	Low	Low	Low	Low	Moderate
Outdoor Recreation Opportunity*						
Hiking	Low	High	Low	Low	High	High
Backpacking	Low	Moderate	Low	Low	High	High
Horseback riding/saddle stock	Low	Moderate	Low	Low	High	High
Fishing	Low	Low	Low	Low	Low	Low
Hunting	High	High	Moderate	High	High	High
Cross-country skiing/Snowshoeing	N/A	N/A	Low	Low	High	Moderate
Overall	**Low**	**Moderate**	**Low**	**Low**	**High**	**High**
Special Features						
Unique fish and wildlife species	Moderate	Low	Low	Moderate	High	Low
Unique plants or plant communities	Low	Low	Low	Low	Low	Moderate
Potential or existing Research Natural Areas	Low	Low	Low	Low	Low	Low
Outstanding landscape features	High	Low	High	Low	High	Low
Significant cultural resource sites	Low	Low	Low	Low	High	Low
Overall	**Low**	**Low**	**Low**	**Low**	**Moderate**	**Low**
Manageability						
Boundaries are recognizable/conform with terrain	Moderate	Low	Low	Moderate	Low	Moderate
Boundary isolates area from Influence by outside activities	Low	Low	Low	Low	Low	Moderate
Boundaries are manageable	Moderate	Low	Low	Moderate	Moderate	Moderate
Boundaries constitute a barrier to prohibited use	Low	Low	Low	Low	Low	Moderate
Overall	**Low**	**Low**	**Low**	**Low**	**Low**	**Moderate**
CAPABILITY RATING OVERALL	**Moderate**	**Low**	**Low**	**Low**	**Moderate**	**Moderate**

Table E-16. Area capability assessment criteria for the Wallowa-Whitman National Forest (Upper Grande Ronde, Wildhorse)

Evaluation Criteria/Area Name	Upper Grande Ronde	Wildhorse
Environmental		
Opportunity for solitude, isolation from sights, sounds, and presence of others (size, screening, distance from impacts, degree of permanent intrusions)	Low	Low
Natural integrity, area is free from disturbance	Low	High
Overall	**Low**	**Moderate**
Challenge		
Provides outstanding opportunities for challenge and adventure	Moderate	Moderate
Outdoor Recreation Opportunity*		
Hiking	Low	Low
Backpacking	Low	Low
Horseback riding/saddle stock	Low	Low
Fishing	Low	Low
Hunting	Moderate	Moderate
Cross-country skiing/Snowshoeing	Low	N/A
Overall	**Low**	**Low**
Special Features		
Unique fish and wildlife species	High	Moderate
Unique plants or plant communities	Low	Low
Potential or existing Research Natural Areas	Low	Low
Outstanding landscape features	High	High
Significant cultural resource sites	High	Moderate
Overall	**Moderate**	**Moderate**
Manageability		
Boundaries are recognizable/conform with terrain	Moderate	Moderate
Boundary isolates area from Influence by outside activities	Moderate	Moderate
Boundaries are manageable	Moderate	Moderate
Boundaries constitute a barrier to prohibited use	Low	Low
Overall	**Moderate**	**Moderate**
CAPABILITY RATING OVERALL	**Moderate**	**Moderate**

Availability Process

While capability evaluated the wilderness characteristics of an area, availability considers other resources. Direction from FSH 1909.12, Chapter 70 (1982) and internal and external comments were used to identify other resources for evaluation and establish the rating process. The Forest identified eight resource categories, and selected resource specialists from the Forest rated the resource categories using a high, moderate, or low rating system. Specialists included recreation managers, wildlife and fishery biologists, hydrologists, ecologists, geologists, fuels and wildfire specialists, land specialists (special use permits), and silviculturists.

Individual Forest Service specialists' ratings are determined for each area. An overall availability rating was then determined by the wilderness program manager.

The following tables list the eight resource categories evaluated and their ratings for each area. The availability of an area for potential wilderness designation is the opposite of the rating for other resource requirements. For example, a rating of high mineral value will mean a low rating for availability.

Availability ratings are informed and supplemented by narratives that provide additional detail for each area including an area overview and area characteristics (see Malheur National Forest Review of Areas with Wilderness Potential, 2010; Umatilla National Forest Review of Areas with Wilderness Potential, 2010; and Wallowa-Whitman National Forest Review of Areas with Wilderness Potential, 2010). Narratives are available in the project record and on the Blue Mountain national forest plan revision website.

Table E-17. Area availability assessment criteria for the Malheur National Forest (Aldrich Mountain, Baldy Mountain, Cedar Gove, Dixie Butte, Dry Cabin, Glacier Mountain)

Evaluation Criteria/Area Name	Aldrich Mountain	Baldy Mtn.	Cedar Grove	Dixie Butte	Dry Cabin	Glacier Mountain
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	N/A	N/A	No	N/A	No	No
Would wilderness designation seriously restrict needed fish management activities?	Yes	Yes	No	N/A	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	No	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUPs and MOAs	No	No	No	Yes	No	No
Presence of Inholdings (private property)	Yes	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	N/A	N/A	No	N/A	N/A	N/A
AVAILABILITY RATING OVERALL	**Available**	**Available**	**Available**	**Not Available**	**Available**	**Available**

N/A = not applicable

Table E-18. Area availability assessment criteria for the Malheur National Forest (Greenhorn Mtn, Jumpoff Joe, Malheur River, McClellan Mtn, Myrtle Silvies, Nipple Butte)

Evaluation Criteria/Area Name	Greenhorn Mtn.	Jumpoff Joe	Malheur River	McClellan Mtn.	Myrtle Silvies	Nipple Butte
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	Yes	Yes	No
Would wilderness designation seriously restrict needed fish management activities?	Yes	No	Yes	Yes	Yes	No
Does the area have high level of strategic or economic mineral development potential?	Yes	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	No	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	Yes	No	No	No	Yes	Yes
Presence of Inholdings (private property)	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	N/A	N/A	N/A	N/A	N/A	N/A
AVAILABILITY RATING OVERALL	**Not Available**	**Available**	**Available**	**Available**	**Not Available**	**Available**

N/A = not applicable

Table E-19. Area availability assessment criteria for the Malheur National Forest (Pine Creek, Shaketable, Strawberry Mtn Additions, Utley Butte)

Evaluation Criteria/Area Name	Pine Creek	Shaketable	Strawberry Mtn. Additions	Utley Butte
Availability Determination				
Is the area vitally needed for increased water production and storage?	No	No	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	Yes
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	No	No
Presence of Inholdings (private property)	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	N/A	N/A	N/A	N/A
AVAILABILITY RATING OVERALL	**Available**	**Available**	**Available**	**Available**

N/A = not applicable

Table E-20. Area availability assessment criteria for the Umatilla National Forest (Asotin Creek, Grande Ronde, Greenhorn Mtn, Hellhole, Horseshoe Ridge, Jumpoff Joe)

Evaluation Criteria/Area Name	Asotin Creek	Grande Ronde	Greenhorn Mtn.	Hellhole	Horseshoe Ridge	Jumpoff Joe
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	No	Yes	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	Yes	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	Yes	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	N/A	No	No	N/A	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	Yes	Yes	No	No
Presence of Inholdings (private property)	Yes	No	No	Yes	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	N/A	N/A	N/A	N/A	N/A	N/A
AVAILABILITY RATING OVERALL	**Available**	**Available**	**Not Available**	**Not Available**	**Available**	**Available**

N/A = not applicable

Table E-21. Area availability assessment criteria for the Umatilla National Forest (Lookingglass, Meadow Creek, Mill Creek, North Fork John Day Additions, North Fork Umatilla Additions, North Mt. Emily)

Evaluation Criteria/Area Name	Lookingglass	Meadow Creek	Mill Creek	North Fork John Day Additions	NF Umatilla Additions	North Mt. Emily
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	Yes	No	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	xx	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	Yes	No	xx	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	No	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	Yes	Yes	No	No	No
Presence of Inholdings (private property)	No	No	Yes	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	Yes	Yes	Yes	No	Yes	Yes
AVAILABILITY RATING OVERALL	**Not Available**	**Not Available**	**Not Available**	**Available**	**Not Available**	**Available**

Table E-22. Area availability assessment criteria for the Umatilla National Forest (Owsley, Potamus, Skookum, South Fork/Tower, Spangler, Squaw/Little Fly)

Evaluation Criteria/Area Name	Owsley	Potamus	Skookum	South Fork/Tower	Spangler	Squaw/ Little fly
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	Yes	Yes	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	Yes	No	No	Yes	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	Yes	Yes	Yes
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	No	Yes	Yes	Yes
Presence of Inholdings (private property)	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	Yes	No	No	No	No	No
AVAILABILITY RATING OVERALL	Not Available	Available	Available	Not Available	Not Available	Not Available

Table E-23. Area availability assessment criteria for the Umatilla National Forest (Texas Butte, Tiger Creek, Upper Tucannon, W-T Three)

Evaluation Criteria/Area Name	Texas Butte	Tiger Creek	Upper Tucannon	W-T Three
Availability Determination				
Is the area vitally needed for increased water production and storage?	No	No	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	Yes	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	Yes	No	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	No	No
Presence of Inholdings (private property)	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	No	No	No
AVAILABILITY RATING OVERALL	Not Available	Available	Available	Available

Table E-24. Area availability assessment criteria for the Umatilla National Forest (Walla Walla River, Wenatchee Creek, Willow Springs

Evaluation Criteria/Area Name	Walla Walla River	Wenatchee Creek	Willow Springs
Availability Determination			
Is the area vitally needed for increased water production and storage?	Yes	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	No
Presence of Inholdings (private property)	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	No	No
AVAILABILITY RATING OVERALL	**Available**	**Available**	**Available**

Table E-25. Area availability assessment criteria for the Wallowa-Whitman National Forest (Beaver Creek, Big Canyon, Boulder Park/Little Eagle Meadows, Buckhorn, Castle Ridge, Cook Ridge)

Evaluation Criteria/Area Name	Beaver Creek	Big Canyon (ID)	Boulder Park/Little Eagle Meadows	Buckhorn	Castle Ridge	Cook Ridge
Availability Determination						
Is the area vitally needed for increased water production and storage?	Yes	No	No	No	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	Yes	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	No	Yes	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	Yes	No	Yes	No	Yes	No
Presence of Inholdings (private property)	No	No	No	Yes	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	Yes	No	No	No	Yes	No
AVAILABILITY RATING OVERALL	**Not Available**	**Available**	**Available**	**Available**	**Not Available**	**Available**

Table E-26. Area availability assessment criteria for the Wallowa-Whitman National Forest (Deadhorse, Dunns Bluff, Grande Ronde, Greenhorn Mountain, Hellhole, Homestead)

Evaluation Criteria/Area Name	Deadhorse	Dunns Bluff	Grande Ronde	Greenhorn Mountain	Hellhole	Homestead
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	No	No	Yes	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	No	N/A	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	Yes	N/A	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	Yes	No	Yes
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	No	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	No	Yes	Yes	Yes
Presence of Inholdings (private property)	No	No	No	No	Yes	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	No	N/A	N/A	N/A	No
AVAILABILITY RATING OVERALL	**Available**	**Available**	**Available**	**Not Available**	**Not Available**	**Available**

N/A = not applicable

Table E-27. Area availability assessment criteria for the Wallowa-Whitman National Forest (Huckleberry, Hurricane Creek, Imnaha Face, Joseph Canyon, Klopton-Corral Creek, Lake Fork)

Evaluation Criteria/Area Name	Huckleberry	Hurricane Creek	Imnaha Face	Joseph Canyon	Klopton-Corral Creek	Lake Fork
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	No	No	No	Yes
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	Yes	No	Yes
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	No	No	No	Yes
Presence of Inholdings (private property)	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	No	No	No	No	No
AVAILABILITY RATING OVERALL	**Available**	**Available**	**Available**	**Available**	**Available**	**Not Available**

Table E-28. Area availability assessment criteria for the Wallowa-Whitman National Forest (Lick Creek, Little Creek, Little Eagle Meadows, Little Sheep, Lord Flat-Sommers Point, Marble Point)

Evaluation Criteria/Area Name	Lick Creek	Little Creek	Little Eagle Meadows	Little Sheep	Lord Flat-Sommers Point	Marble Point
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	Yes	No	No	No	Yes
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	Yes	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	Yes	No	No	Yes	No	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	Yes	Yes	Yes	Yes	Yes	Yes
Presence of Inholdings (private property)	No	No	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	Yes	No	No	No	Yes
AVAILABILITY RATING OVERALL	**Not Available**	**Not Available**	**Available**	**Not Available**	**Available**	**Not Available**

Table E-29. Area availability assessment criteria for the Wallowa-Whitman National Forest (Monument Rock, Mountain Sheep, Mount Emily, North Mount Emily, Reservoir, Sheep Divide)

Evaluation Criteria/Area Name	Monument Rock	Mountain Sheep	Mount Emily	North Mount Emily	Reservoir	Sheep Divide
Availability Determination						
Is the area vitally needed for increased water production and storage?	Yes	No	No	No	Yes	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	No	No	No
Does the area have high level of strategic or economic mineral development potential?	No	?	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	No	No	No	Yes	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No	No	No	Yes	No
Presence of Inholdings (private property)	No	Yes	No	No	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	No	Yes	Yes	No	No
AVAILABILITY RATING OVERALL	**Available**	**Not Available**	**Not Available**	**Available**	**Not Available**	**Available**

Table E-30. Area availability assessment criteria for the Wallowa-Whitman National Forest (Snake River, Squaw/Little Fly, Tope Creek, South Fork/Tower, Twin Mountain, Upper Catherine Creek)

Evaluation Criteria/Area Name	Snake River	Squaw (Little Fly)	Tope Creek	South Fork/Tower	Twin Mountain	Upper Catherine Creek
Availability Determination						
Is the area vitally needed for increased water production and storage?	No	No	No	No	Yes	Yes
Would wilderness designation seriously restrict needed wildlife management activities?	No	No	No	No	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No	No	Yes	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No	No	No	Yes	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	No	Yes	No	Yes	Yes	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	Yes	Yes	No	Yes	Yes	Yes
Presence of Inholdings (private property)	No	No	No	No	Yes	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	No	No	No	Yes	Yes
AVAILABILITY RATING OVERALL	**Available**	**Not Available**	**Available**	**Not Available**	**Not Available**	**Not Available**

Table E-31. Area availability assessment criteria for the Wallowa-Whitman National Forest (Upper Grande Ronde, Wildhorse)

Evaluation Criteria/Area Name	Upper Grande Ronde	Wildhorse
Availability Determination		
Is the area vitally needed for increased water production and storage?	No	No
Would wilderness designation seriously restrict needed wildlife management activities?	No	No
Would wilderness designation seriously restrict needed fish management activities?	No	No
Does the area have high level of strategic or economic mineral development potential?	No	No
Is the land needed to meet clearly documented resource demands such as for timber, minerals, or developed recreation sites including winter sports?	Yes	No
Are there existing contractual or other significant obligations on the area not in concert with wilderness designation? Includes SUP's and MOA's	No	No
Presence of Inholdings (private property)	No	No
Is the land needed to meet clearly documented resource demands such as for fuels treatment?	No	No
AVAILABILITY RATING OVERALL	**Available**	**Available**

Table E-32. Area capability and availability summary for the Malheur National Forest

Malheur National Forest Areas	Capability Rating	Availability Rating
Aldrich Mountain	Moderate	Available
Baldy Mountain	Moderate	Available
Cedar Grove	Low	Available
Dixie Butte	Moderate/Low	Not Available
Dry Cabin	Moderate/High	Available
Flag Creek	N/A	N/A
Fox Creek	N/A	N/A
Glacier Mountain	Moderate	Available
Greenhorn Mountain	Moderate/Low	Not Available
Jumpoff Joe	Moderate	Available
Malheur River	Moderate	Available
McClellan Mountain	Moderate	Available
Myrtle-Silvies	Low	Not Available
Nipple Butte	Low	Available
North Fork Malheur River	N/A	N/A
Pine Creek	Low	Available
Shaketable	Moderate	Available
Silver Creek	N/A	N/A
Strawberry Mountain Additions	Moderate	Available
Utley Butte	Low	Available

Table E-33. Area capability and availability summary for the Umatilla National Forest

Umatilla National Forest Areas	Capability Rating	Availability Rating
Asotin Creek	Moderate	Available
Grande Ronde	Moderate	Available
Greenhorn Mountain	Moderate/Low	Not Available
Hellhole	High	Not Available
Horseshoe Ridge	Moderate/Low	Available
Jaussaud Corral	Low	Not Available
Jumpoff Joe	Moderate	Available
Lookingglass	Moderate	Not Available
Meadow Creek	Low	Not Available
Mill Creek Watershed	Moderate	Not Available
North Fork John Day Additions	Unknown	Unknown
North Fork Umatilla Additions	Moderate	Not Available
North Mount Emily	Low	Available
Owsley	Moderate	Not Available
Potamus	Moderate	Available
Skookum	Low	Available
South Fork - Tower	Low	Not Available
Spangler	Moderate	Not Available
Squaw (Little Fly)	Low	Not Available
Texas Butte	Moderate	Not Available
Tiger Creek	Moderate	Available
Upper Tucannon	Moderate	Available
W - T Three	High	Available
Walla Walla River	Moderate	Available
Wenatchee Creek	High	Available
Willow Springs	Moderate	Available

Table E-34. Area capability and availability summary for the Wallowa-Whitman National Forest

Wallow-Whitman National Forest Areas	Capability Rating	Availability Rating
Beaver Creek	Moderate	Not Available
Big Canyon Id	Moderate	Available
Boulder Park	Moderate	Available
Buckhorn	Moderate	Available
Castle Ridge	Moderate	Not Available
Cook Ridge	Moderate	Available
Deadhorse	Low	Available
Dunns Bluff	Low	Available
Grande Ronde	Moderate	Available
Greenhorn Mountain	Moderate/Low	Not Available
Hellhole	High	Not Available
Homestead	Low	Available
Huckleberry	Moderate	Available
Hurricane Creek	Low	Available
Imnaha Face	Moderate	Available
Joseph Canyon	Moderate	Available
Klopton-Corral Creek	Moderate	Available
Lake Fork	Moderate	Not Available
Lick Creek	Moderate	Not Available
Little Creek	High	Not Available
Little Eagle Meadows	Moderate	Available
Little Sheep	Low	Not Available
Lord Flat Somers Point	Moderate	Available
Marble Point	Moderate	Not Available
Monument Rock	Low	Available
Mountain Sheep	Moderate	Not Available
Mt. Emily	Low	Not Available
North Mount Emily	Low	Available
Reservoir	Low	Not Available
Sheep Divide	Low	Available
Snake River	Moderate	Available
Squaw	Low	Not Available
Tope Creek	Low	Available
South Fork/Tower	Low	Not Available
Twin Mountain	Moderate	Not Available
Upper Catherine Creek	Moderate	Not Available
Upper Grande Ronde	Moderate	Available
Wildhorse	Moderate	Available

Need Evaluation

A Wilderness Needs Assessment was completed in 2010 by the forest plan interdisciplinary team. This evaluation determined the need to include these areas as part of the overall National Wilderness Preservation System. This assessment covered the Blue Mountains national forests planning area as whole, not individual potential wilderness areas. The need for additional wilderness in the Blue Mountains was assessed using the following factors from the Forest Service Handbook (FSH 1902.12, Chapter 70 Subpart 72.31):

1. The location, size, and type of other wilderness areas in the general vicinity and their distance from the proposed area. Considering accessibility of areas to population centers and user groups. Public demand for wilderness may increase with proximity to growing population centers.
2. Present visitor pressure on other wilderness areas, the trends in use, changing patterns of use, population expansion factors, and trends and changes in transportation.
3. The extent to which nonwilderness lands on the national forests or other federal lands are likely to provide opportunities for unconfined outdoor recreation experiences.
4. The need to provide a refuge for those species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena.
5. Within social and biological limits, management may increase the capacity of established wildernesses to support human use without unacceptable depreciation of the wilderness resource.
6. An area's ability to provide for preservation of identifiable landform types and ecosystems. Consideration of this factor may include utilization of Edwin A. Hammond‟s subdivision of landform types and the Bailey-Kuchler ecosystem classification. This approach is helpful from the standpoint of round out the National Wilderness Preservation System and may be further subdivided to suit local, subregional, and regional needs.

The evaluation provides decisionmakers with information on the resources and uses of each area, and a regional context for making wilderness designation proposals. Proposing wilderness through the Wilderness Evaluations and the completed revised Forest Plan is not the only route for making wilderness proposals. A wilderness recommendation may also be made based on needs brought forward through public comment. Therefore, the decision to propose a wilderness recommendation is not entirely based on need, but may be made based on various land management strategies and factors, which include maintaining biological and natural function and diversity within and on the natural landscape. The following is a summary of the findings from the need evaluation.

Factor 1 – Location, Size, Type of Wilderness; Demographics; and Accessibility

Designated wilderness areas in the Blue Mountains are more remote and less accessible to major population centers than other wilderness areas in the general vicinity. While the current designated wilderness areas offer opportunities for solitude, the time and expense needed to visit the Blue Mountains limits the number of out-of-area visitors that utilize current wilderness. Only a small percentage of the use in current wilderness occurs by other than local residents. Given the expected population growth in the general vicinity over the next 15 years, this is not expected to change.

Factor 2 – Use, Visitors, and Changing Patterns of Use

Currently, use of the Blue Mountains wilderness areas account for only a small part (8 percent) of the overall use on the Blue Mountains and even a smaller proportion (4 percent) of the use of national forest lands in the general vicinity. Use trend data suggests that aging populations and shifts in the type of activities younger people are interested in will result in a 2 to 8 percent increase in demand for activities over the next 15 years. This increase will primarily be in day uses from non-wilderness areas. Current wilderness areas in the Blue Mountains reach capacity only in specific areas during brief, high use periods.

Factor 3 - Opportunities for Unconfined Outdoor Recreation Experiences

The Blue Mountains provide high potential opportunities for unconfined recreation experiences and solitude, regionally and locally. The social demand for these unconfined experiences is related to general dispersed settings, not specifically wilderness areas that provide both motorized and nonmotorized activities.

Factor 4 – Refuge for Species or Protected Areas

The draft revised land management plan will identify a variety of plan components (existing designated wilderness, management areas, desired conditions, objectives, guidelines, and monitoring). The arrangement of these areas on the landscape and the objectives and guidelines through which they are managed will set the stage for the Malheur, Umatilla and Wallowa-Whitman National Forests contribution to the diversity of native plant, animal, and fish species. Based on this conclusion, no recommendations for additional designated wilderness are needed to provide refuge for native species.

Factor 5 – Capacity of Established Wildernesses to Support Human Use

Although social desires exist for more wilderness areas across the Blue Mountains, there is not a social need to designate additional wilderness because the current wilderness areas are not exceeding capacity, except in site-specific locations on limited occasions. Alternative sites exist within and adjacent to these areas and within other wilderness areas in the Blue Mountains to accommodate visitor responses to these instances. Based on current uses, trends, primary market zones, demographic changes, crowding levels, visitor pressures, projected uses, existing opportunities for unconfined recreation, and social values. Wilderness use is unlikely to exceed the capacity of the existing wilderness areas and is not likely to result in a need for more wilderness in the next 15 years.

Factor 6 – Ability to Provide for Preservation of Landform Types and Ecosystems

Desired conditions, objectives for treatments, and guidelines for management in the draft revised land management plan insure that natural process will predominate and that ecosystems will be preserved across the landscape. While there are opportunities to increase representation of under-represented vegetation types in the wilderness system, given the management direction outlined in the draft revised land management plan, wilderness designation is not needed for “preservation of landform types and ecosystems.”

Appendix F: Suitable Acres within Range Allotments for Each Alternative

The following tables display the total acres suitable for cattle or sheep grazing in each allotment. Suitability and capability for grazing within allotments is determined by factors that include canopy closure, steepness of slopes, plant production level, and soil condition (land type associations).

Suitability by alternative varies with proximity to bighorn sheep, proximity to federally listed and species at risk plants, riparian management areas, research natural areas, botanical areas, grazing after wildfire, greater sage grouse habitat, wild and scenic river corridors, and proximity of grazing to federally listed fish.

Acres listed in the following tables were generated using geographic information systems data for comparison purposes between alternatives. The Forest Service cannot assure the reliability or suitability of this information for another purpose.

Table F-1. Suitable acres for cattle grazing in active and vacant cattle allotments for each alternative on the Malheur National Forest

Allotment	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt. F	Total Acres Within the Allotment
Aldrich	8,237	8,858	1,315	8,237	8,237	8,237	8,237	20,351
Alkali	24,844	24,815	20,464	24,844	24,844	24,844	24,844	26,397
Allison	19,671	19,775	15,997	19,671	19,671	19,671	19,671	21,077
Antelope (Silvies)	26,131	26,238	22,500	26,131	26,131	26,131	26,131	28,194
Antelope (Upper Malheur)	4,297	4,299	3,777	4,297	4,297	4,297	4,297	4,519
Balance Creek	122	124	0	122	122	122	122	150
Bear Creek	1,271	1,274	0	1,271	1,271	1,271	1,271	1,477
Beech Creek	1,290	1,273	60	1,290	1,290	1,290	1,290	1,632
Big Sagehen	20,327	20,177	17,686	20,327	20,327	20,327	20,327	21,373
Blue Creek	15,953	15,849	13,278	15,953	15,953	15,953	15,953	17,422
Blue Mountain (vacant)	0	18,748	0	18,746	0	18,794	0	22,683
Bluebucket	17,611	18,218	5,190	17,611	17,611	17,611	17,611	23,500
Bridge Creek	7,247	7,231	6,300	7,247	7,247	7,247	7,247	7,621
Buck Mountain	40,236	40,215	33,224	40,236	40,236	40,236	40,236	41,478
Calamity	18,691	18,660	15,306	18,691	18,691	18,691	18,691	22,412
Camp Creek (Silvies)	12,192	12,164	10,239	12,192	12,192	12,192	12,192	13,684

Allotment	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt. F	Total Acres Within the Allotment
Central Malheur	9,125	9,484	579	9,125	9,125	9,125	9,125	10,727
County Road	127	129	127	127	127	127	127	135
Crooked Creek	4,931	4,924	4,212	4,931	4,931	4,931	4,931	5,076
Dark Canyon	26,272	26,318	9,687	26,272	26,272	26,272	26,272	31,733
Deadhorse	8,246	8,038	912	8,246	8,246	8,246	8,246	15,507
Deardorff	5,686	5,639	0	5,686	5,686	5,686	5,686	10,984
Deer Creek	1,806	1,797	38	1,806	1,806	1,806	1,806	2,177
Devine	23,602	23,594	18,835	23,602	23,602	23,602	23,602	25,010
Dixie	9,661	9,538	1	9,661	9,661	9,661	9,661	16,824
Dollar Basin	14,133	14,101	205	14,133	14,133	14,133	14,133	16,395
Donaldson	6,034	6,010	911	6,034	6,034	6,034	6,034	7,809
Fawn Spring	5,775	5,781	0	5,775	5,775	5,775	5,775	6,289
Ferg	81	82	81	81	81	81	81	108
Fields Peak	18,198	18,104	46	18,198	18,198	18,198	18,198	30,451
Flag Prairie	24,101	24,820	11,535	24,101	24,101	24,101	24,101	28,746
Flagtail	13,768	13,742	11,008	13,768	13,768	13,768	13,768	14,890
Fox	18,007	17,912	1,456	18,007	18,007	18,007	18,007	26,125
Frenchy	484	486	355	484	484	484	484	500
Green Butte	42,851	44,200	34,201	42,851	42,851	42,851	42,851	45,155
Hanscomb	7,385	7,320	3,392	7,385	7,385	7,385	7,385	9,233
Herberger (combined)	0	0	0	0	0	129	0	167
Highway	705	705	40	705	705	705	705	784
Hot Springs	1,343	1,332	2	1,343	1,343	1,343	1,343	2,283
House Creek	2,824	2,819	2,507	2,824	2,824	2,824	2,824	3,252
Hughet Valley	1,820	1,798	1,412	1,820	1,820	1,820	1,820	1,877
Hunter Cabin	13,117	13,120	6,004	13,117	13,117	13,117	13,117	15,599
Indian Creek	951	1,206	344	951	951	951	951	1,285
Izee	15,369	15,262	12,264	15,369	15,369	15,369	15,369	18,434
Jack Creek	9,376	9,345	7,407	9,376	9,376	9,376	9,376	9,802

Allotment	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt. F	Total Acres Within the Allotment
Joaquin	19	17	0	19	19	19	19	35
Justice	422	422	20	422	422	422	422	499
Keeney Meadows	220	219	0	220	220	220	220	295
Koehler	90	88	47	90	90	90	90	115
Lewis Creek	365	361	198	365	365	365	365	392
Little Mowich	286	289	274	286	286	286	286	317
Lake Creek (vacant)	0	0	0	0	0	9,799	0	10,196
Logan Valley	3,706	3,685	0	3,706	3,706	3,706	3,706	3,762
Lonesome	29,560	29,532	24,888	29,560	29,560	29,560	29,560	31,875
Long Creek	35,272	35,228	0	35,272	35,272	35,272	35,272	49,472
Lower Middle Fork	37,754	37,995	0	37,754	37,754	37,754	37,754	57,426
Lower Nicoll	3,928	3,928	3,142	3,928	3,928	3,928	3,928	3,966
Mcclellan	412	366	0	412	412	412	412	2,808
Mccoy Creek	978	956	0	978	978	978	978	980
McCullough	0	0	0	0	0	397	0	626
Mt. Vernon/John Day	34,196	33,753	7,839	34,196	34,196	34,196	34,196	45,941
Muddy	5,927	5,899	4,940	5,927	5,927	5,927	5,927	6,552
Murderers Creek	52,575	52,948	1,241	52,575	52,575	52,575	52,575	73,518
Myrtle	24,416	24,311	20,700	24,416	24,416	24,416	24,416	29,313
North Fork	23,280	25,315	14,843	23,280	23,280	23,280	23,280	31,036
Ott	26,234	26,265	14,725	26,234	26,234	26,234	26,234	29,868
Pearson	59	60	43	59	59	59	59	65
Pine Creek	35,053	35,697	29,260	35,053	35,053	35,053	35,053	39,663
Poison	57	57	14	57	57	57	57	74
Rail Creek	9,341	9,276	334	9,341	9,341	9,341	9,341	17,022
Rainbow	24,569	24,552	19,681	24,569	24,569	24,569	24,569	26,277
Reynolds Creek	11,680	10,778	0	11,680	11,680	11,680	11,680	21,608
Rosebud	4,462	4,420	3,622	4,462	4,462	4,462	4,462	6,370
Roundtop	10,653	10,644	0	10,653	10,653	10,653	10,653	13,212

Allotment	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt. F	Total Acres Within the Allotment
Sawmill	20,848	20,834	16,849	20,848	20,848	20,848	20,848	21,461
Sawtooth	14,971	15,000	11,682	14,971	14,971	14,971	14,971	16,682
Scatfield	626	612	585	626	626	626	626	684
Scotty Creek	32,027	32,026	26,511	32,027	32,027	32,027	32,027	35,482
Seneca	7,184	7,127	3,457	7,184	7,184	7,184	7,184	10,027
Silver Creek	30,038	32,026	24,084	30,038	30,038	30,038	30,038	34,727
Silvies	7,748	7,732	6,900	7,748	7,748	7,748	7,748	8,621
Slide Creek	19,249	19,463	1,226	19,249	19,249	19,249	19,249	24,595
Smoky	8,040	8,014	6,492	8,040	8,040	8,040	8,040	9,043
Snow Mountain	10,701	10,709	8,449	10,701	10,701	10,701	10,701	12,362
Snowshoe	5,385	5,334	3,891	5,385	5,385	5,385	5,385	6,383
Spring Creek*	44,890	45,157	7,065	44,890	44,890	44,890	44,890	57,748
Star Glade	1,036	1,033	0	1,036	1,036	1,036	1,036	1,117
Story-Fry	487	485	434	487	487	487	487	540
Sullens (vacant)	0	0	0	0	0	30,155	0	46,426
Summit Prairie	22,328	22,249	15,784	22,328	22,328	22,328	22,328	25,327
Upper Middle Fork	35,299	36,668	2	35,299	35,299	35,299	35,299	54,285
Van	5,168	5,533	4,450	5,168	5,168	5,168	5,168	6,669
War Canyon	509	511	344	509	509	509	509	534
West Malheur	17,897	18,787	15,827	17,897	17,897	17,897	17,897	22,908
West Myrtle	8,152	8,151	6,831	8,152	8,152	8,152	8,152	8,540
Williams Pasture	234	231	0	234	234	234	234	294
Windy Point (combined)						141		335
Wolf Mountain	24,225	24,637	20,559	24,225	24,225	24,225	24,225	31,607
York	503	501	0	503	503	503	503	519

*Spring creek allotment runs both sheep and cattle on an annual basis

Table F-2. Suitable acres for sheep grazing within active sheep allotments for each alternative on the Malheur National Forest

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Donnelly	54,716	54,490	54,490	54,490	54,490	54,490	54,490	56,054
Spring Creek*	47,080	46,856	0	46,856	46,856	46,856	46,856	57,748

*Spring creek allotment runs both sheep and cattle on an annual basis

Table F-3. Suitable acres for cattle grazing in active cattle allotments for each alternative on the Umatilla National Forest

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Asotin	6,836	10,510	3,059	6,836	6,836	6,836	6,836	39,022
Brock	130	379	25	130	130	130	130	964
Central Desolation	6,956	7,069	2,236	6,956	6,956	6,956	6,956	13,934
Coalmine	608	608	271	608	608	608	608	1,097
Collins Butte	7,356	7,875	1,650	7,356	7,356	7,356	7,356	16,916
Cooper Creek	894	894	678	894	894	894	894	1,284
Ditch Creek	16,467	16,559	1,258	16,467	16,467	16,467	16,467	37,150
Eden	11,130	15,807	0	11,130	11,130	11,130	11,130	34,113
F.G. Whitney	26,908	26,908	2,866	26,908	26,908	26,908	26,908	49,932
Hardman	12,211	12,462	0	12,211	12,211	12,211	12,211	20,913
Hidaway	16,543	16,566	0	16,543	16,543	16,543	16,543	37,142
Hutchison	167	167	83	167	167	167	167	208
Indian Creek	34,989	29,446	2,896	34,989	34,989	34,989	34,989	76,163
Jim Creek	0	17	0	70	0	70	0	106
Klondike	11,648	11,831	104	11,648	11,648	11,648	11,648	24,624
Little Wall	23,488	24,384	858	23,488	23,488	23,488	23,488	37,169
Lucky Strike	7,046	7,006	1,117	7,046	7,046	7,046	7,046	16,973
Matlock	5,751	5,882	288	5,751	5,751	5,751	5,751	10,697
Mcdonald Spring	48	48	24	48	48	48	48	48
Monument	10,107	10,120	1,084	10,107	10,107	10,107	10,107	18,568

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Peola	13,726	15,978	3,108	13,726	13,726	13,726	13,726	43,736
Stonehill	0	0	0	228	0	228	0	255
Swale Creek	14,176	14,792	809	14,176	14,176	14,176	14,176	27,051
Tamarack	7,896	8,228	438	7,896	7,896	7,896	7,896	19,397
Texas Bar	28,124	28,655	2,555	28,124	28,124	28,124	28,124	41,889
Thompson Flat	4,119	4,201	21	4,119	4,119	4,119	4,119	6,535
Wenatchee	1,933	2,203	992	1,933	1,933	1,933	1,933	6,252
Western Desolation	8,591	8,591	3,077	8,591	8,591	8,591	8,591	13,459
Winlock	2,940	4,116	432	2,940	2,940	2,940	2,940	5,166
Yellowjacket	3,330	3,380	431	3,330	3,330	3,330	3,330	7,577

Table F-4. Suitable acres for sheep grazing within active sheep allotments for each alternative on the Umatilla National Forest

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Butcher Creek	2,902	2,902	2,902	2,902	2,902	2,902	2,902	10,890
Central Desolation	11,292	11,292	1,652	11,292	11,292	11,292	11,292	13,934
Cunningham	11,314	11,314	1,659	11,314	11,314	11,314	11,314	19,135
North End	37,535	5,455	24	19,308	19,308	19,308	19,308	126,923
Spring Mountain	8,499	8,499	8,399	8,499	8,499	8,499	8,499	35,509

Table F-5. Suitable acres for cattle grazing in active and vacant cattle allotments for each alternative on the Wallowa-Whitman National Forest

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Al-Cunningham	321	475	0	321	321	321	321	1,296
Alder Springs	13,446	13,446	8,167	13,446	13,446	13,446	13,446	21,712
Auburn	8,434	8,392	6,925	8,434	8,434	8,434	8,434	15,076
Balm Creek	262	259	139	262	262	262	262	1,643

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Bear Gulch	509	2,234	0	509	509	509	509	8,964
Big Creek	21,738	21,239	8,915	21,738	21,738	21,738	21,738	44,744
Big Sheep	760	2,826	0	760	760	760	760	18,780
Black Mountain	2,894	2,894	2,261	2,894	2,894	2,894	2,894	4,694
Blue Canyon	6,379	6,379	4,127	6,379	6,379	6,379	6,379	8,463
Boulder Creek	2,240	4,399	1,069	2,240	2,240	2,240	2,240	11,532
Bourne	3,939	4,546	321	3,939	3,939	3,939	3,939	15,995
Bridgeport	3,022	3,081	2,410	3,022	3,022	3,022	3,022	4,438
Buck Creek	11,709	12,321	0	11,709	11,709	11,709	11,709	19,544
Bullrun	12,370	12,370	10,372	12,370	12,370	12,370	12,370	30,116
Camp Creek	0	0	0	10,732	0	10,732	0	23,076
Carrol Creek	55	116	0	55	55	55	55	1,100
Catherine Creek	5,632	5,844	1,952	5,632	5,632	5,632	5,632	20,944
Chalk Creek	43	50	0	43	43	43	43	276
Chesnimnus	10,848	10,909	9	10,848	10,848	10,848	10,848	30,057
Chicken Hill (vacant)	0	0	0	0	0	8,773	0	15,573
China Creek	3,253	3,253	2,760	3,253	3,253	3,253	3,253	7,367
Clark Mountain	156	156	58	156	156	156	156	319
Cold Springs	247	247	0	247	247	247	247	555
Cougar Creek	8,498	8,609	0	8,498	8,498	8,498	8,498	18,331
Cree	121	121	99	121	121	121	121	188
Crow Creek	557	557	0	557	557	557	557	1,206
Dark-Ensign	14,241	14,241	2,467	14,241	14,241	14,241	14,241	25,825
Davis Creek	3,393	3,393	0	3,393	3,393	3,393	3,393	5,640
Day Ridge	346	468	98	346	346	346	346	2,626
Dean-Huck	10,292	10,292	7,334	10,292	10,292	10,292	10,292	15,955
Denney Creek	295	295	172	295	295	295	295	760

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Divide	7,939	8,602	0	7,939	7,939	7,939	7,939	14,745
Dobbins	140	140	0	140	140	140	140	282
Dodson-Haas	4	11	0	4	4	4	4	19
Doe Creek	6,036	6,162	0	6,036	6,036	6,036	6,036	14,940
Eagle Valley	15,489	15,717	10,333	15,489	15,489	15,489	15,489	32,589
East Pine Valley	15,319	15,485	3,029	15,319	15,319	15,319	15,319	33,085
Elk Mountain	206	206	0	206	206	206	206	207
Elmwood	121	121	90	121	121	121	121	162
Fine	581	581	0	581	581	581	581	1,513
Five Points	7,084	7,523	1	7,084	7,084	7,084	7,084	20,263
Frazier Mountain	1,629	1,629	550	1,629	1,629	1,629	1,629	2,617
Fruit Springs	190	190	106	190	190	190	190	253
Ghostbull	396	673	289	396	396	396	396	2,311
Gilkison	953	953	434	953	953	953	953	1,796
Goose Creek	15,262	15,274	9,854	15,262	15,262	15,262	15,262	27,323
Grouseline	217	514	0	217	217	217	217	2,742
Hale	249	249	197	249	249	249	249	458
Haney Gulch (vacant)	0	0	0	207	0	213	0	893
Hawley Gulch	2,273	2,273	1,207	2,273	2,273	2,273	2,273	2,584
Hooker Flat	60	60	46	60	60	60	60	76
Hootin Rock	118	155	68	118	118	118	118	353
Hunting Camp	2,816	2,960	0	2,816	2,816	2,816	2,816	10,236
Indian Crane (vacant)	0	0	0	0	0	22,050	0	43,014
Indian Creek	2,650	0	124	2,650	2,650	2,650	2,650	7,496
Ironside	9,323	9,465	8,100	9,323	9,323	9,323	9,323	16,985
Joseph Creek	55	120	0	55	55	55	55	1,003

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Jordan Creek (vacant)	0	0	0	0	0	6,582	0	10,011
Limber Jim (vacant)	0	0	0	0	0	15,570	0	24,932
Little Bald Mountain	483	483	383	483	483	483	483	836
Lobo	9,374	9,374	30	9,374	9,374	9,374	9,374	15,655
Lockhart	4,921	4,989	3,943	4,921	4,921	4,921	4,921	10,108
Marr Flat	10,571	11,426	0	10,571	10,571	10,571	10,571	42,932
Middle Point	234	240	4	234	234	234	234	1,396
Mill Creek (vacant)	0	0	0	2,964	0	2,976	0	8,585
Mink	78	91	0	78	78	78	78	268
North Burnt River	9,186	9,186	6,982	9,186	9,186	9,186	9,186	18,906
North Fork Burnt River	37	37	37	37	37	37	37	46
North Powwatka	356	560	0	356	356	356	356	4,506
Pole Creek	3,669	3,790	0	3,669	3,669	3,669	3,669	11,213
Powell Gulch	246	246	189	246	246	246	246	365
Schleur	56	73	0	56	56	56	56	712
Sheep Ranch	22,600	22,600	0	22,600	22,600	22,600	22,600	32,335
Sheep Rock	0	0	0	0	0	4,761	0	19,646
Snow Creek	7,376	8,216	5,997	7,376	7,376	7,376	7,376	15,994
South Burnt River	12,818		11,249	12,818	12,818	12,818	12,818	32,566
South Powwatka	5,658	5,868	99	5,658	5,658	5,658	5,658	10,993
Sparks (vacant)	0	0	0	0	0	1	0	1,213
Special #2	42	84	0	42	42	42	42	108
Spring Creek	0	53	0	0	0	53	0	20,951
Starkey	14,338	14,361	0	14,338	14,338	14,338	14,338	30,381
Stovepipe	11,155	11,155	2,812	11,155	11,155	11,155	11,155	21,142

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Swamp Creek	10,644	13,143	0	10,644	10,644	10,644	10,644	33,458
Table Mountain	3,621	4,448	0	3,621	3,621	3,621	3,621	14,604
Tater Knob (vacant)	0	0	0	0	0	109	0	359
Teepee Elk	1,368	1,368	0	1,368	1,368	1,368	1,368	4,385
Tie Creek	96	0	0	96	96	96	96	311
Tin Trough	3,180	3,299	0	3,180	3,180	3,180	3,180	4,454
Tope Creek	2,203	2,317	0	2,203	2,203	2,203	2,203	7,372
Trouble Gulch	72	136	41	72	72	72	72	1,139
Upper Clover Creek	16	16	0	16	16	16	16	16
Vigne	705	705	0	705	705	705	705	1,285
Warm Springs	9	9	0	9	9	9	9	297
West Burnt River	7,107	7,107	5,681	7,107	7,107	7,107	7,107	13,315
West Minam	6,129	4,418	0	6,129	6,129	6,129	6,129	13,682
West Pine Valley	14,432	14,742	926	14,432	14,432	14,432	14,432	34,939
Whipple Gulch	3,163	3,162	2,598	3,163	3,163	3,163	3,163	5,028
Whitehorse	6,600	6,600	0	6,600	6,600	6,600	6,600	13,798
Whitney	220	220	169	220	220	220	220	478

Table F-6. Suitable acres for sheep grazing within active and vacant sheep allotments for each alternative on the Wallowa-Whitman National Forest

Allotment	Alt. A	Alt. B	Alt. C	Alt D	Alt. E	Alt. E-Modified and E-Modified Departure	Alt F	Total Acres Within the Allotment
Cunningham	18,147	18,147	3,576	18,147	18,147	18,147	18,147	25,203
McCarty	9,837	9,837	9,814	9,837	9,837	9,837	9,837	17,923
Mud Creek	3,710	0	0	3,437	3,437	3,437	3,437	8,090
Spring Creek	11,864	11,864	11,864	11,864	11,864	11,864	11,864	20,951

Appendix G: Maps
Malheur National Forest

The following maps are displayed in an 11-inch by 17-inch format.

- Management Areas for Alternative A
- Management Areas for Alternative B
- Management Areas for Alternative C
- Management Areas for Alternative D
- Management Areas for Alternatives E and F
- Management Areas for Alternatives E-Modified and E-Modified Departure

Blue Mountains Forest Plan Revision FEIS (2018)
Malheur National Forest
Management Areas for Alternative A

Hardman
Lehman Springs
Dale
Wallowa-Whitman National Forest
Umatilla National Forest
Umatilla National Forest
Monument
Granite
395
Long Creek
Galena
19
Fox
Austin
26
Dayville
Prairie City
Unity
Mount Vernon
John Day
Canyon City
Seneca
95
Drewsey
Washington
Idaho
Malheur National Forest
Oregon
20
Burns
Hines
N
W
E
S

Legend

- 1A Designated Wilderness Area
- 2A Designated Wild & Scenic River
- 2B Research Natural Area
- 2C Botanical Area
- 2D Geologic Area
- 2H Scenic Area
- 2J Municipal Watershed
- 3A Backcountry (non-motorized use)
- 3B Backcountry (motorized use)
- 4A General Forest
- 4B Riparian Management Area
- 4C Old Forest
- 4D Big Game Winter/Summer Range
- 4E Wildlife/Fish Emphasis
- 4F Visuals
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary

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0 1.75 3.5 7 10.5 14 Miles

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Malheur National Forest
Management Areas for Alternative B

Hardman
Lehman Springs
Dale
Wallowa-Whitman National Forest
Umatilla National Forest
Monument
Granite
Kimberly
Long Creek
Galena
Sumpter
Fox
Austin
Dayville
Mount Vernon
John Day
Prairie City
Unity
Canyon City
Seneca
Izee
Drewsey
Burns
Hines

Washington
Idaho
Oregon
Malheur National Forest

N
W
E
S

Legend

- 1A Designated Wilderness Area
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- 3B Backcountry (motorized use)
- 4A General Forest
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- 2F Scenic Byway & All-American Road
- 2G Nationally Designated Trail

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Miles
0 1.75 3.5 7 10.5 14

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Malheur National Forest
Management Areas for Alternative C

Hardman
Lehman Springs
Dale
Wallowa-Whitman National Forest
Umatilla National Forest
Monument
Granite
Kimberly
Sumpter
Long Creek
Galena
Fox
Austin
Dayville
Mount Vernon
John Day
Prairie City
Unity
Canyon City
Seneca
Izee
Drewsey
Burns
Hines
Malheur National Forest
Washington
Idaho
Oregon

395
19
26
20
78
7

N
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S

Legend

- 1A Designated Wilderness Area
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- 2C Botanical Area
- 2D Geologic Area
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- 2J Municipal Watershed
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- 4C Old Forest
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- 2G Nationally Designated Trail

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0 1.75 3.5 7 10.5 14 Miles

Blue Mountains Forest Plan Revision FEIS (2018)
Malheur National Forest
Management Areas for Alternative D

Hardman
Lehman Sprin
Dale
Umatilla National Forest
Monument
395
Kimberly
Long Creek
Galena
19
Fox
Austin
Dayville
Mount Vernon
26
John Day
Prairie City
Canyon City
Seneca
Izee
395
Drewsey
Washington
Idaho
Malheur National Forest
Oregon
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Burns
Hines
78

Legend

- 1A Designated Wilderness Area
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- 2A Eligible Wild & Scenic River
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- 2C Botanical Area
- 2D Geologic Area
- 2H Scenic Area
- 2J Municipal Watershed
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Miles
0 1.75 3.5 7 10.5 14

Blue Mountains Forest Plan Revision FEIS (2018)
Malheur National Forest
Management Areas for Alternatives E and F

Hardman
Lehman Springs
Wallowa-Whitman National Forest
Dale
Umatilla National Forest
Monument
395
Granite
Kimberly
Sumpter
Long Creek
Galena
19
Fox
7
Austin
26
Dayville
Mount Vernon
John Day
Prairie City
Unity
Canyon City
Seneca
Izee
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Drewsey
Washington
Idaho
Malheur National Forest
Oregon
20
Burns
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78
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Legend

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0 1.75 3.5 7 10.5 14 Miles

Blue Mountains Forest Plan Revision FEIS (2018)
Malheur National Forest
Management Areas for Alternatives E-Modified and E-Modified Departure

Hardman
Dale
Wallowa-Whitman National Forest
Umatilla National Forest
Monument
Granite
Kimberly
Sumpter
Long Creek
Galena
Fox
Austin
Dayville
Mount Vernon
John Day
Prairie City
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Canyon City
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Legend

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0 1.75 3.5 7 10.5 14 Miles

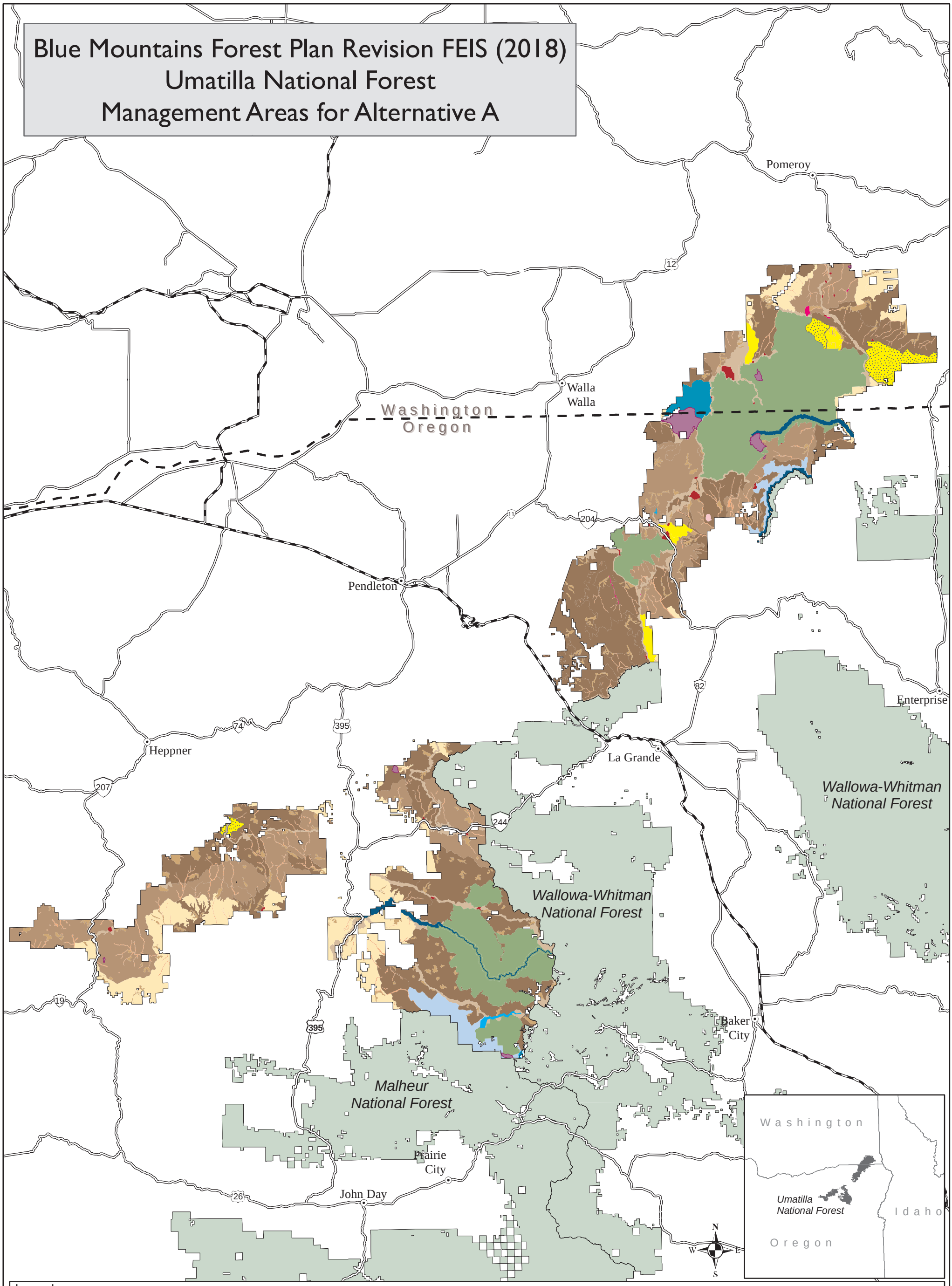
Washington
Idaho
Oregon
Malheur National Forest

Appendix G: Maps
Umatilla National Forest

The following maps are displayed in an 11-inch by 17-inch format.

- Management Areas for Alternative A
- Management Areas for Alternative B
- Management Areas for Alternative C
- Management Areas for Alternative D
- Management Areas for Alternatives E and F
- Management Areas for Alternatives E-Modified and E-Modified Departure

Blue Mountains Forest Plan Revision FEIS (2018)
Umatilla National Forest
Management Areas for Alternative A



Legend

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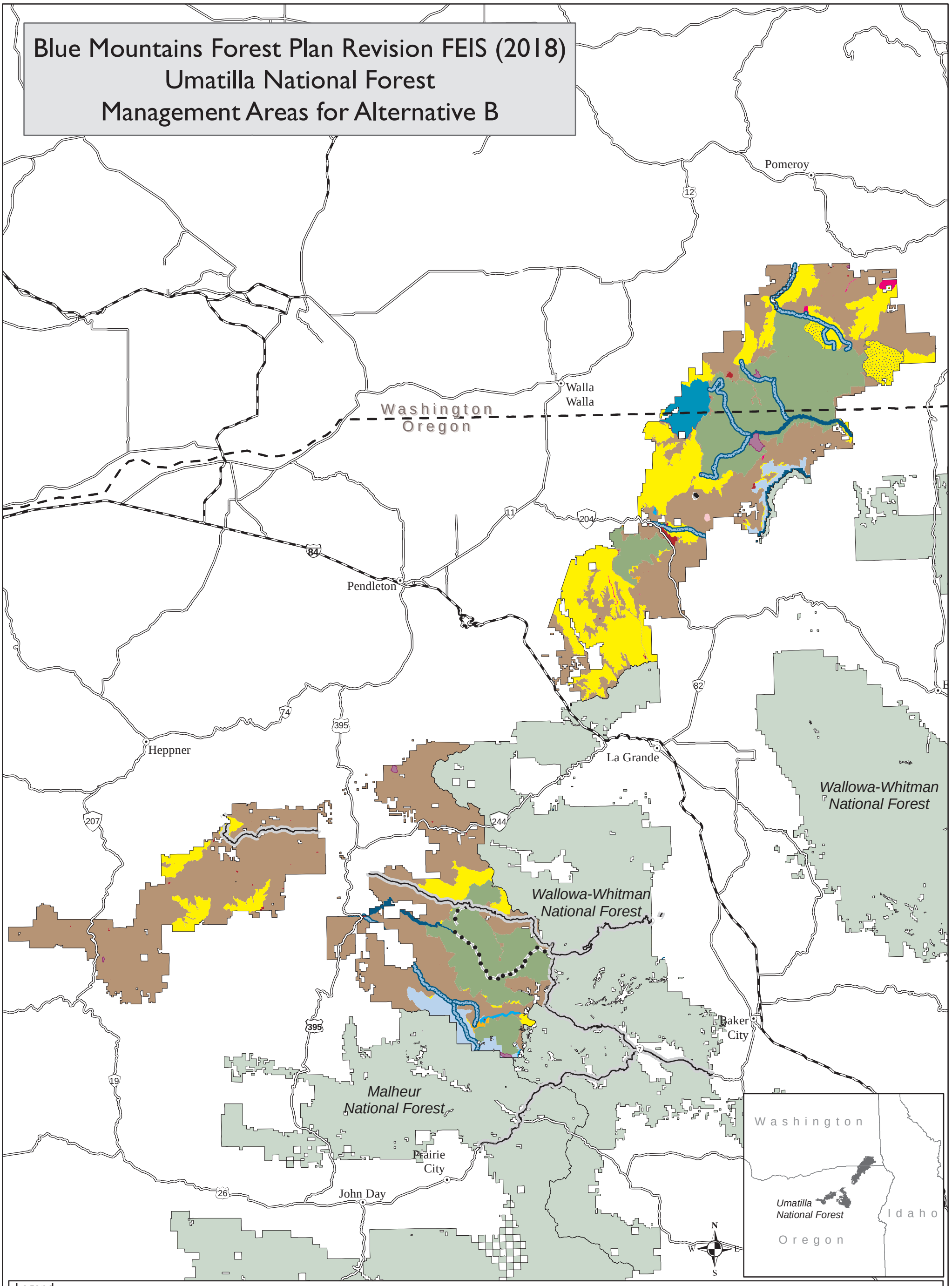
Blue Mountains Forest Plan Revision FEIS (2018)
Umatilla National Forest
Management Areas for Alternative B



Legend

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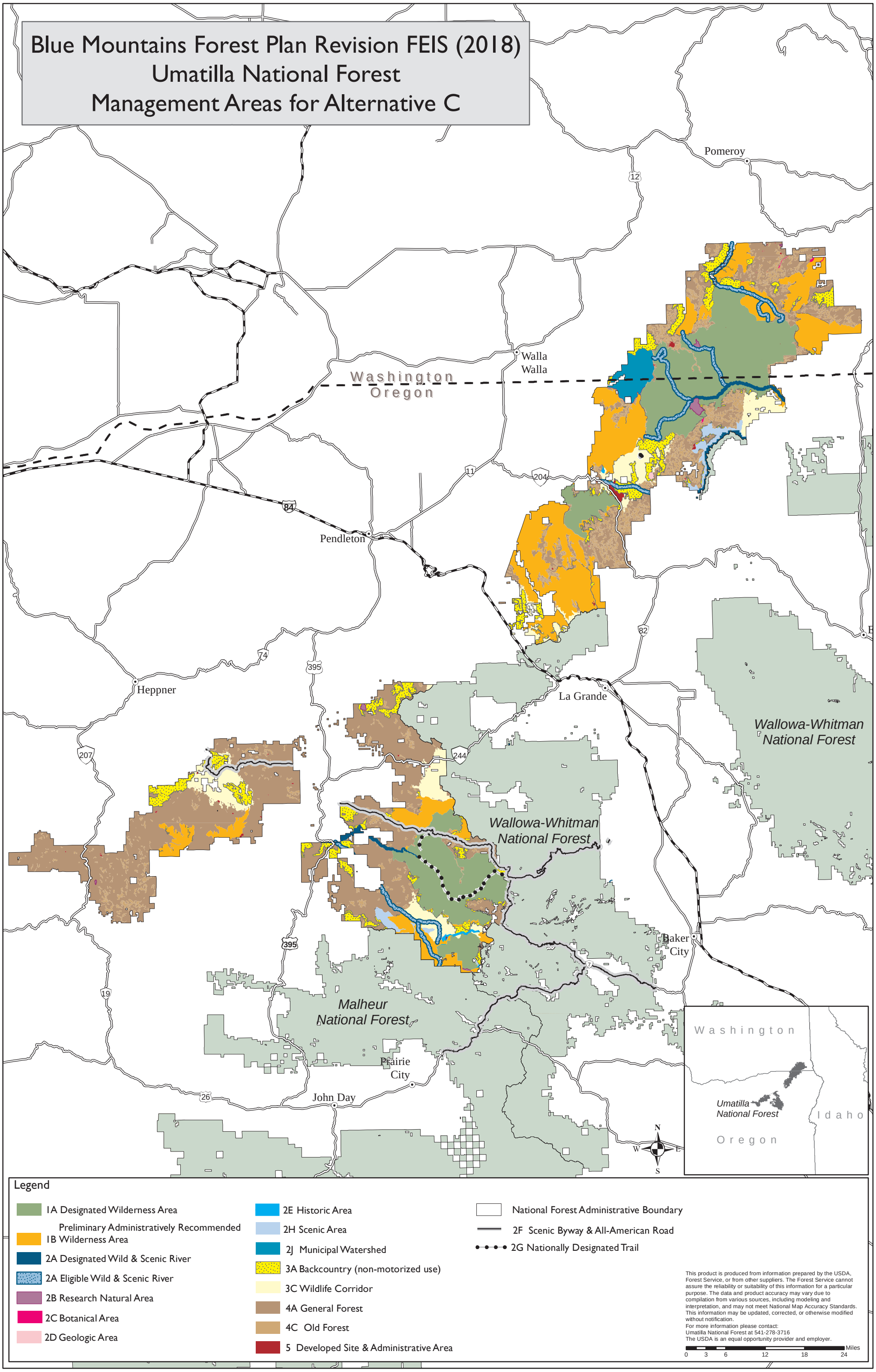
0 3 6 12 18 24 Miles

Blue Mountains Forest Plan Revision FEIS (2018)
Umatilla National Forest
Management Areas for Alternative C



Legend

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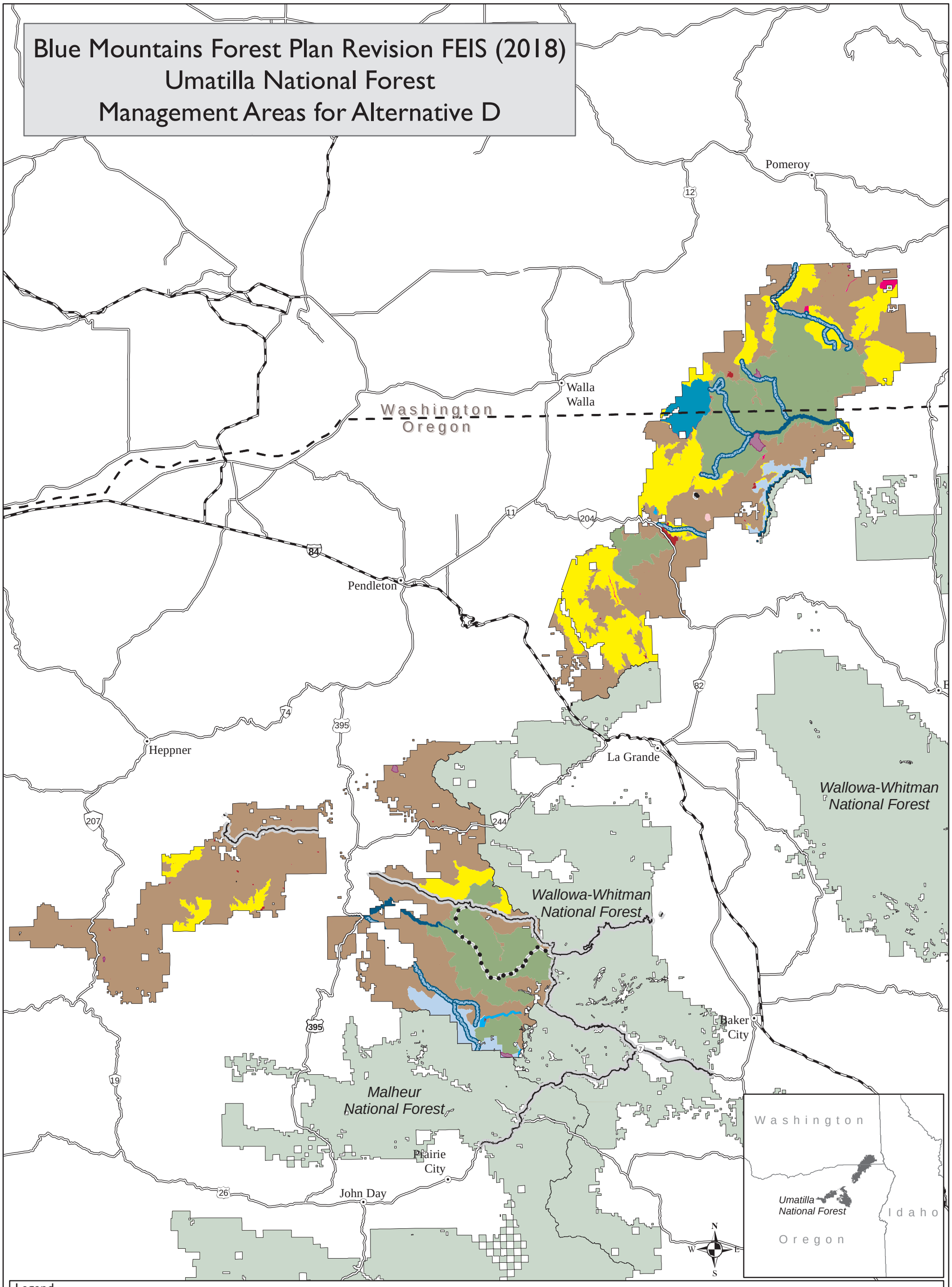
0 3 6 12 18 24 Miles

Blue Mountains Forest Plan Revision FEIS (2018)
Umatilla National Forest
Management Areas for Alternative D



Legend

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- 2A Eligible Wild & Scenic River
- 2B Research Natural Area
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- 2D Geologic Area
- 2E Historic Area
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Miles
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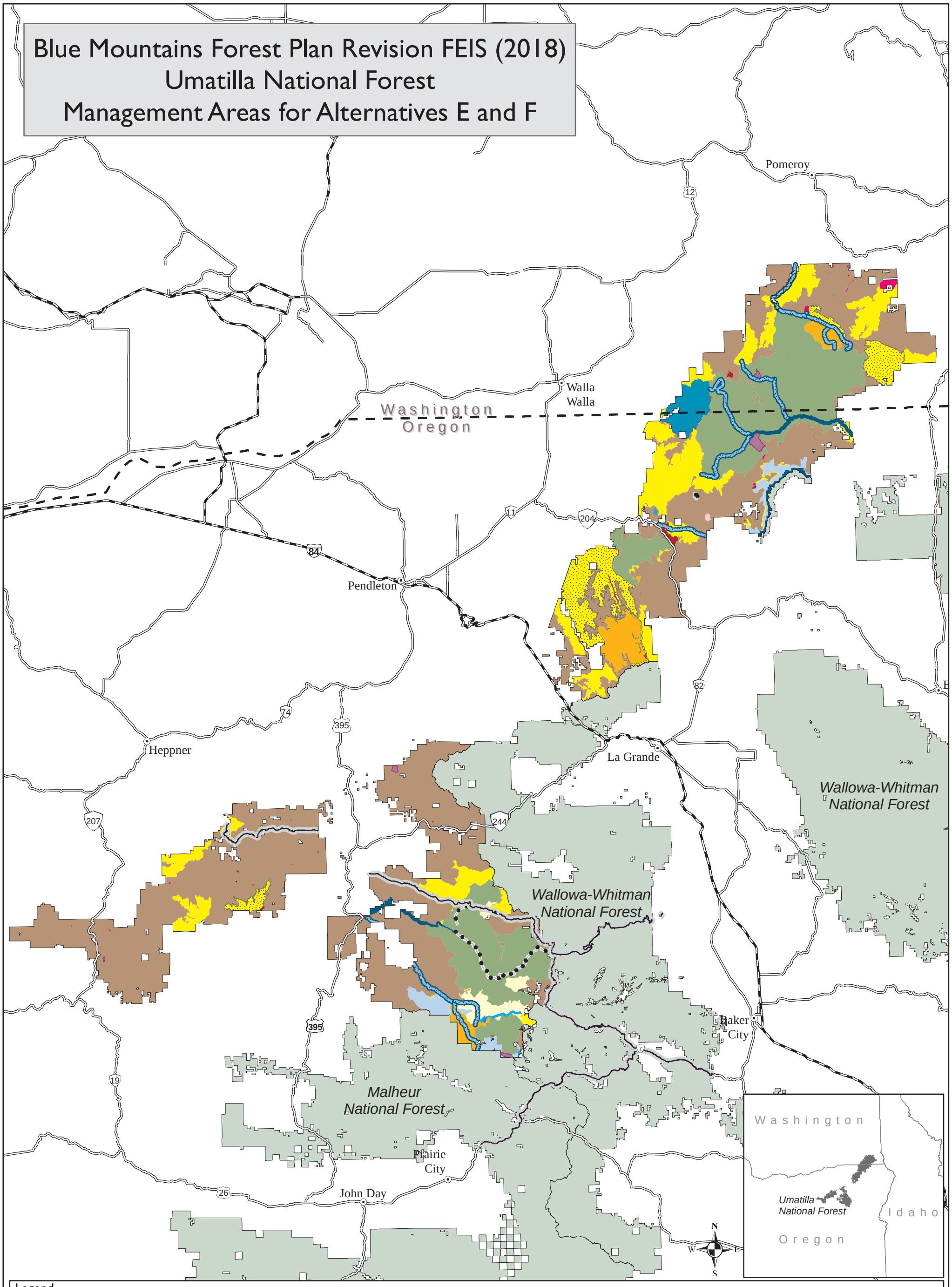
Blue Mountains Forest Plan Revision FEIS (2018)
Umatilla National Forest
Management Areas for Alternatives E and F



Legend

- 1A Designated Wilderness Area
- Preliminary Administratively Recommended 1B Wilderness Area
- 2A Designated Wild & Scenic River
- 2A Eligible Wild & Scenic River
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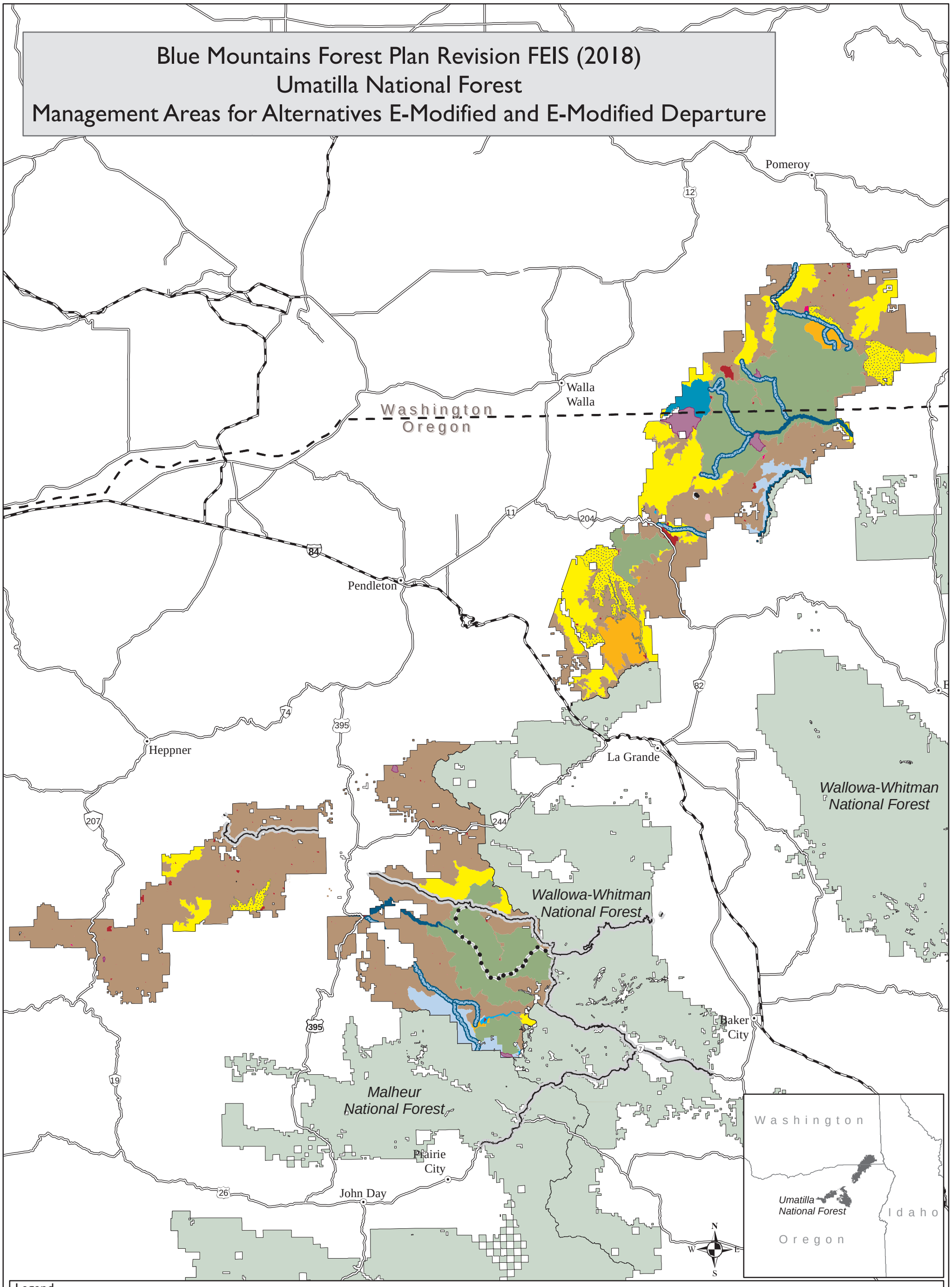
Miles
0 3 6 12 18 24

Blue Mountains Forest Plan Revision FEIS (2018)
Umatilla National Forest
Management Areas for Alternatives E-Modified and E-Modified Departure



Legend

- 1A Designated Wilderness Area
- Preliminary Administratively Recommended 1B Wilderness Area
- 2A Designated Wild & Scenic River
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- 2E Historic Area
- 2H Scenic Area
- 2J Municipal Watershed
- 3A Backcountry (non-motorized use)
- 3B Backcountry (motorized use)
- 4A General Forest
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- 2F Scenic Byway & All-American Road
- 2G Nationally Designated Trail

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For more information please contact:
Umatilla National Forest at 541-278-3716
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Appendix G: Maps
Wallowa-Whitman National Forest

The following maps are displayed in an 11-inch by 17-inch format.

- Management Areas for Alternative A
- Management Areas for Alternative B
- Management Areas for Alternative C
- Management Areas for Alternative D
- Management Areas for Alternatives E and F
- Management Areas for Alternatives E-Modified and E-Modified Departure

Blue Mountains Forest Plan Revision FEIS (2018)
Wallowa-Whitman National Forest
Management Areas for Alternative A

Washington
Oregon
Washington
Idaho
Oregon
Idaho
Umatilla
National Forest
Umatilla
National Forest
Malheur
National Forest
Malheur
National Forest
Walla
Walla
La Grande
Enterprise
Baker
City
Prairie
City
125
12
11
335
331
204
82
129
62
237
244
203
3
30
86
71
84
220
7
245
26
N
W
E
S

Wallowa-Whitman
National Forest
Washington
Idaho
Oregon

Legend

- 1A Designated Wilderness Area
- 1C Wilderness Study Area
- 2A Designated Wild & Scenic River
- 2B Research Natural Area
- 2I Starkey Experimental Forest and Range
- 3B Backcountry (motorized use)
- 4A General Forest
- 4C Old Forest
- 4D Big Game Winter/Summer Range
- 4E Wildlife/Fish Emphasis
- 4F Visuals
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- Hells Canyon National Recreation Area

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Wallowa-Whitman National Forest at 541-523-6391
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Blue Mountains Forest Plan Revision FEIS (2018)
Wallowa-Whitman National Forest
Management Areas for Alternative B

Washington
Oregon
Washington
Idaho
Oregon
Idaho
Umatilla
National Forest
Umatilla
National Forest
Malheur
National Forest
Malheur
National Forest
Walla
Walla
La Grande
Enterprise
Baker
City
Prairie
City
125
12
11
335
331
204
82
237
244
203
30
220
7
84
86
129
62
71
245
26
3
N
W
E
S

Wallowa-Whitman
National Forest
Washington
Idaho
Oregon

Legend

- 1A Designated Wilderness Area
- Preliminary Administratively Recommended 1B Wilderness Area
- 1C Wilderness Study Area
- 2A Designated Wild & Scenic River
- 2A Eligible Wild & Scenic River
- 2B Research Natural Area
- 2I Starkey Experimental Forest and Range
- 2J Municipal Watershed
- 3B Backcountry (motorized use)
- 4A General Forest
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- Hells Canyon National Recreation Area
- 2F Scenic Byway & All-American Road
- 2G Nationally Designated Trail

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Blue Mountains Forest Plan Revision FEIS (2018)
Wallowa-Whitman National Forest
Management Areas for Alternative C

Washington
Oregon
Washington
Idaho
Oregon
Idaho
Umatilla
National Forest
Umatilla
National Forest
Malheur
National Forest
Malheur
National Forest
Walla
Walla
La Grande
Enterprise
Baker
City
Prairie
City
125
12
11
335
331
204
82
237
244
129
62
3
203
30
86
71
84
220
7
245
26
N
W
E
S

Washington
Wallowa-Whitman
National Forest
Idaho
Oregon

Legend

- 1A Designated Wilderness Area
- Preliminary Administratively Recommended 1B Wilderness Area
- 1C Wilderness Study Area
- 2A Designated Wild & Scenic River
- 2A Eligible Wild & Scenic River
- 2B Research Natural Area
- 2I Starkey Experimental Forest and Range
- 2J Municipal Watershed
- 3A Backcountry (non-motorized use)
- 3C Wildlife Corridor
- 4A General Forest
- 4C Old Forest
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- Hells Canyon National Recreation Area
- 2F Scenic Byway & All-American Road
- 2G Nationally Designated Trail

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0 2.5 5 10 15 20 Miles

Blue Mountains Forest Plan Revision FEIS (2018)
Wallowa-Whitman National Forest
Management Areas for Alternative D

Washington
Oregon
Washington
Idaho
Oregon
Idaho
Umatilla
National Forest
Umatilla
National Forest
Malheur
National Forest
Malheur
National Forest
Walla
Walla
La Grande
Enterprise
Baker
City
Prairie
City
125
12
11
335
331
204
82
129
62
237
244
203
30
3
86
84
71
220
7
245
26
N
W
E
S

Wallowa-Whitman
National Forest
Washington
Idaho
Oregon

Legend

- 1A Designated Wilderness Area
- 1C Wilderness Study Area
- 2A Designated Wild & Scenic River
- 2A Suitable Wild & Scenic River
- 2B Research Natural Area
- 2I Starkey Experimental Forest and Range
- 2J Municipal Watershed
- 3B Backcountry (motorized use)
- 4A General Forest
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- Hells Canyon National Recreation Area
- 2F Scenic Byway & All-American Road
- 2G Nationally Designated Trail

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Blue Mountains Forest Plan Revision FEIS (2018)
Wallowa-Whitman National Forest
Management Areas for Alternatives E and F

Washington
Oregon
Washington
Idaho
Oregon
Idaho
Umatilla
National Forest
Umatilla
National Forest
Malheur
National Forest
Malheur
National Forest
Walla
Walla
La Grande
Enterprise
Baker
City
Prairie
City
125
12
11
335
331
204
82
237
244
129
62
3
203
30
86
220
7
84
71
245
26
N
W
E
S

Wallowa-Whitman
National Forest
Washington
Idaho
Oregon

Legend

- 1A Designated Wilderness Area
- Preliminary Administratively Recommended 1B Wilderness Area
- 1C Wilderness Study Area
- 2A Designated Wild & Scenic River
- 2A Suitable Wild & Scenic River
- 2B Research Natural Area
- 2I Starkey Experimental Forest and Range
- 2J Municipal Watershed
- 3A Backcountry (non-motorized use)
- 3B Backcountry (motorized use)
- 3C Wildlife Corridor
- 4A General Forest
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- Hells Canyon National Recreation Area
- 2F Scenic Byway & All-American Road
- 2G Nationally Designated Trail

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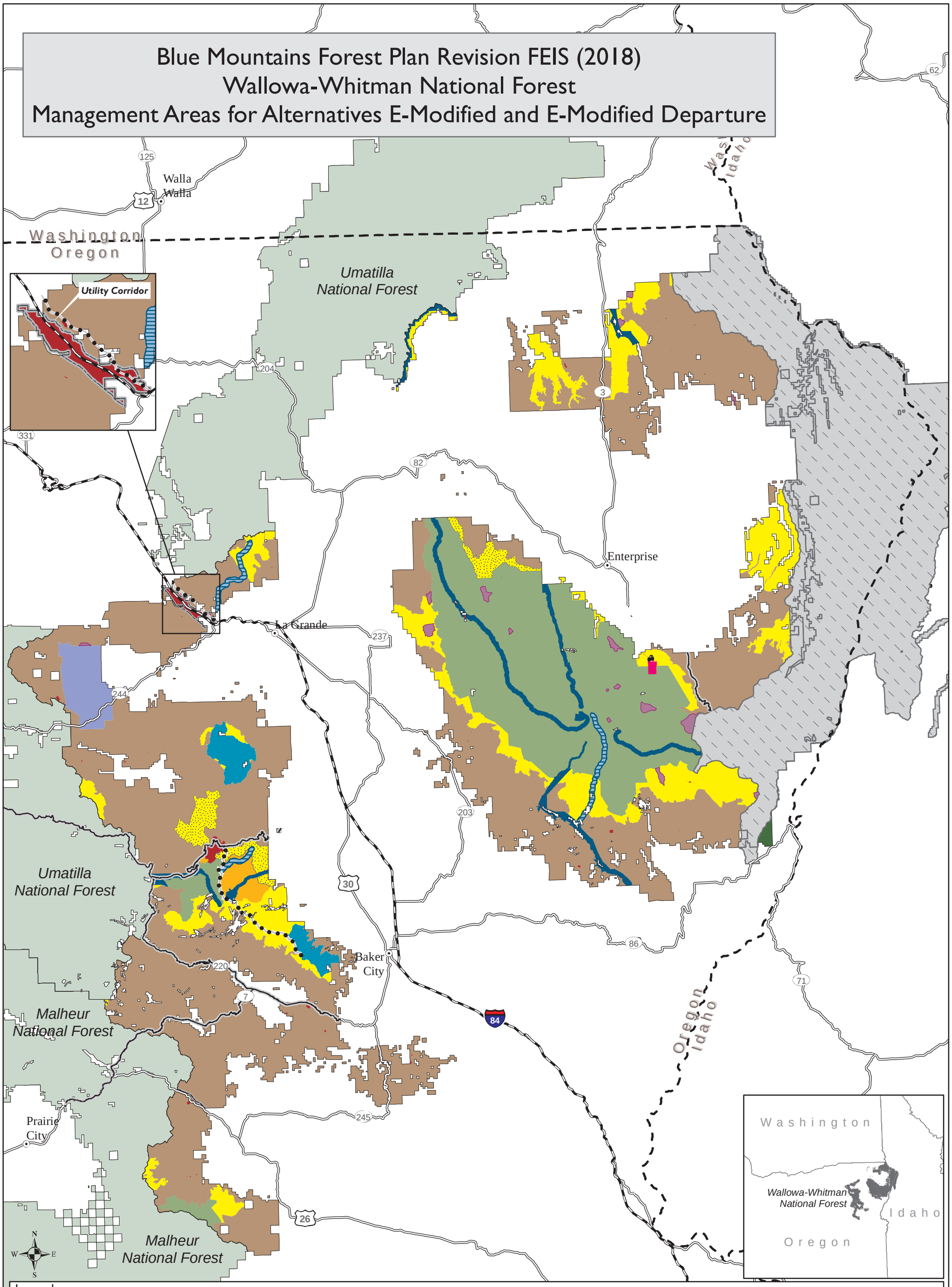
Blue Mountains Forest Plan Revision FEIS (2018)
Wallowa-Whitman National Forest
Management Areas for Alternatives E-Modified and E-Modified Departure



Legend

- 1A Designated Wilderness Area
- Preliminary Administratively Recommended 1B Wilderness Area
- 1C Wilderness Study Area
- 2A Designated Wild & Scenic River
- 2A Suitable Wild & Scenic River
- 2B Research Natural Area
- 2C Botanical Area
- 2I Starkey Experimental Forest and Range
- 2J Municipal Watershed
- 3A Backcountry (non-motorized use)
- 3B Backcountry (motorized use)
- 4A General Forest
- 5 Developed Site & Administrative Area
- National Forest Administrative Boundary
- Hells Canyon National Recreation Area
- Utility Corridor
- 2F Scenic Byway & All-American Road
- 2G Nationally Designated Trail

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